
**PATIENTS' PERCEPTION OF SERVICE QUALITY IN ORTHOTICS AND
PROSTHETICS DEPARTMENT AT A SELECTED UNIVERSITY**

By

Nosipho Thabethe

(BTech: Business Administration)

Dissertation submitted in fulfilment of the requirements for the degree

Master of Management Sciences: (Marketing)

Department of Marketing and Retail Management

Durban University of Technology

**Prof S. Penceliah (B Paed, B Com Hons, M Com, Ph.D.)
Supervisor**

DECLARATION

I, Nosipho Thabethe, hereby declare that this research dissertation is my own work and that all sources I have used or quoted to the best of my knowledge have been indicated and acknowledge by means of complete references.

N Thabethe

02/09/2019
Date

Acknowledgments

“For I know the plans I have for you, says the Lord. They are plans for good and not for disaster, to give you a future and hope” Jeremiah 29:11

I give thanks to the Almighty, what a journey. I wish to thank my supervisor, Prof Darry Penceliah for his continued support, motivation and not giving up on me. Without you, this would not have been possible. You were a light in my darkest moments when I felt like giving up you gave me the strength to carry on. I am grateful to all the respondents who took their time to answer my questionnaire.

To my daughter, thank you for always understanding that mommy can't be home with you. Your warm smile helped me to get through the anxious moments.

To my friends and family who supported me through this journey, I am forever grateful.

A special thanks to my former HOD, Mr. D. Askew, you believed that I would finish this project. To my current HOD Mr. B. Nothling, thank you for having faith in me. To my colleagues, thank you for putting up with me, during my anxious moments. To Mr. S.C. Onwubu thank you for your continued support and putting up with me.

ABSTRACT

Interest in orthotics and prosthetics has grown considerably over the last decade. South Africa is experiencing a shortage of registered orthotic and prosthetic specialists, and this poses a problem for patients who require artificial devices. In this sector, the most important strategy for orthotists and prosthetists is to obtain and maintain patient expectations and perception of service quality.

Customer satisfaction and service quality are very important concepts that organisations must understand in order to remain competitive in business and hence grow. It is therefore vital for organisations to know how to measure these constructs from the patients' perspective in order to better understand their needs and hence satisfy them.

The aim of this study is to assess patients' perceptions and expectations of service quality at Medical Orthotics and Prosthetics Department at a selected University in KwaZulu-Natal. The objectives are; to identify patient's expectations in terms of the delivered services provided at the Medical Orthotics and Prosthetics department; to ascertain the perceptions of patients' towards the services provided at the Medical Orthotics and Prosthetics department and to measure the gap between patients' perceptions and expectations of service quality using a modified version of the SERVQUAL model. The instrument used to assess the patients' perceptions of service quality was the SERVQUAL questionnaire, measuring expectations and perceptions according to the five service quality dimensions.

One hundred and twenty patients were surveyed using the SERVQUAL questionnaire. The respondents were selected using non-probability sampling within which convenience sampling was applied. The data was analysed using descriptive and inferential statistical techniques. The study shows that patients' expectations of service quality exceeded their perceptions of the five service quality dimensions used in the SERVQUAL questionnaire. The smallest dimension gap score proved to be tangibles, while the largest gap score of the study proved to be assurance followed by responsiveness. Therefore, it is recommended that the selected (MOP) department attend to these gaps and ensure that the necessary strategies are implemented so that patients receive a high level of service quality as expected.

Table of Contents

DECLARATION	ii
Acknowledgments	iii
ABSTRACT	iv
LIST OF FIGURES.....	x
LIST OF TABLES	xi
CHAPTER ONE	1
1.1 INTRODUCTION	1
1.2 CONTEXT OF THE STUDY.....	1
1.3 PROBLEM STATEMENT	2
1.5 RATIONALE OF THE STUDY	3
1.6 LIMITATIONS OF THE STUDY	3
1.7 RESEARCH METHODOLOGY	4
1.8 STRUCTURE OF THE STUDY.....	5
1.9 CONCLUSION	6
CHAPTER TWO.....	7
2.1 INTRODUCTION	7
2.2 Defining customer	7
2.3 Customer attributes.....	7
2.4 Customer Satisfaction	7
2.4.1 Customer Satisfaction and Service Quality.....	8
2.4.2 Types of customer satisfaction	10
2.4.3 Customer satisfaction determinants.....	10
2.4.4 Measuring customer satisfaction	11
2.4.5 Differences between customer satisfaction and Service Quality.....	12
2.4.6 Perceived Value.....	12
2.5 Customer Service Quality	13
2.6 Customers Expectations of Service Quality	13
2.7 Zone of Tolerance.....	13
2.8 Customer Perceptions of service	14
2.9 Dimensions of Service Quality	14

2.9.1 Reliability: delivering on promises.....	15
2. 9.2 Responsiveness: Being willing to help	15
2.9.3 Assurance: Inspiring trust and confidence	16
2.9.4 Empathy: Treating customers as individuals.....	17
2.9.5 Tangibles: Representing the service physically	17
2.10 Service Quality	17
2.10.1 Defining Service Quality.....	18
2.10.2 Characteristics of Service Quality	19
2.10.3 Knowledge on service quality	25
2.10.4 Understanding Service Quality	26
2.10.5 SERVQUAL	28
2.11 Patients as Customers	31
2.11.1 Understanding Prosthetics and Orthotics.....	31
2.11.2 Marketing and Patient Expectations	32
2.11.3 The Link between Service Quality and Customer Satisfaction.....	33
2.11.4 Primary versus Secondary Patients.....	34
2.11.5 The Benefits of Customer Satisfaction and Service Quality	35
2.12 Understanding GAP Model	38
2.12.1 Level of Patient's expectations	40
2.12.2 Effect of Customer Demographics on Service Quality Expectations and Perceptions.....	40
2.13 The Use of Servqual in Orthotics and Prosthetics.....	41
2.14 The benefits of SERVQUAL in Orthotics and Prosthetics	42
2.15 Conceptual Framework	43
2.16 The relationship between customer satisfaction and Service quality for this study	44
2.17 Measuring Service Quality	44
2.18 The Quality of GAP Model Analysis	47
2.18.1 Gap 1: Consumer expectation and management perception.....	48
2.18.2 Gap 2: Management perception and service-quality specification	48
2.18.3 Gap 3: Service-quality specifications and service delivery	49

2.18.4 Gap 4: Service delivery and external communications	49
2.18.5 Gap 5: Perceived service and expected service	50
2.19 Service quality delivery system	50
2.19.1 The Role of Service Staff in Service Delivery	51
2.19.2 The Role of the Patient in Service Delivery.....	52
2.19.3 Timing of Service Delivery	53
2.20 CONCLUSION	54
CHAPTER THREE	55
3.1 INTRODUCTION	55
3.2 TARGET POPULATION	55
3.3 SAMPLING TECHNIQUE	56
3.4 SAMPLE SELECTION AND SIZE.....	56
3.5 RESEARCH DESIGN	57
3.6 QUESTIONNAIRE DESIGN.....	57
3.7 Questionnaire research objective.....	57
3.7.1 Questionnaire context.....	58
3.7.2 Type of questions	59
3.8 DATA COLLECTION.....	60
3.9 DATA ANALYSIS METHODS	60
3.9.1 Descriptive statistics	60
3.9.2 Inferential Statistical Analysis	60
3.9.3 INSTRUMENT	61
3.10 RELIABILITY.....	61
3.11 VALIDITY	62
3.12 ETHICS.....	63
3.13 CONCLUSION	63
CHAPTER FOUR	64
4.1 INTRODUCTION	64
4.2 The research instrument	64
4.3 DESCRIPTIVE STATISTICS	64

4.3.1 Gender.....	65
4.3.2 Age group	65
4.3.3 Cross-tabulation of the respondent's age and gender	66
4.3.4 Highest educational level	67
4.3.4 Number of the visit to MOP department.....	67
4.4.1 Tangibles	68
4.4.2 Reliability	69
4.4.3 Responsiveness	72
4.4.4 Assurance.....	73
4.4.5 Empathy.....	74
4.4.6 Inferential Analysis.....	76
4.4.7 The results of reliability and validity statistics.....	76
4.4.8 Factor Analysis	77
4.5 Dimensions and Gap score analysis	79
4.5.1 Tangibles	79
4.5.2 Reliability	80
4.5.3 Responsiveness	81
4.5.4 Assurance.....	82
4.5.5 Empathy.....	84
4.5.6 Overall dimension gap scores.....	85
4.6 Hypothesis Testing	86
4.7 CHI-SQUARE TEST	89
4.8 Conclusion	92
CHAPTER FIVE	93
5.1 INTRODUCTION	93
5.2 SUMMARY OF THEORETICAL STUDY.....	93
5.3 FINDINGS IN RELATION TO THE SERVICE QUALITY DIMENSIONS.....	95
5.3.1 Tangibility.....	95
5.3.2 Reliability	95
5.3.3 Other dimensions related factors	96

5.4 EMPIRICAL STUDY	96
5.5 ACHIEVEMENT OF RESEARCH OBJECTIVES	96
5.7 RECOMMENDATIONS.....	98
5.8 RECOMMENDATIONS FOR ORTHOTICS AND PROSTHETICS IN GENERAL.....	99
5.9 SCOPE FOR THE FUTURE RESEARCH	100
5.10 CONCLUSION	101
REFERENCES	102
ANNEXURE 1: LETTER OF INFORMATION AND QUESTIONNAIRE.....	111
ANNEXURE 2: PERMISSION LETTER	112
ANNEXURE 3: CONFIRMATIONN LETTER TO CONDUCT STUDY.....	113
ANNEXURE 4: QUESTIONNAIRE.....	114
ANNEXURE 5: Chi-Square Test	117
ANNEXURE 6: Paired T-Test Scores.....	118
ANNEXURE 7: Rotated Component Matrix.....	119
ANNEXURE 8: Turnitin Report.....	120

LIST OF FIGURES

Figure 2. 1: The relationship between expectations, customer satisfaction, and service quality	27
Figure 2. 2: The linkage between service quality and customer satisfaction:	34
Figure 2. 3: Benefits of customer satisfaction and service quality	36
Figure 2. 4: Conceptual framework	43
Figure 2. 5: Gap Model Analysis of service quality Gaps Model	46
Figure 4. 1 Educational level	67
Figure 4. 2 Number of visits	68
Figure 4. 3: Mean score for Tangibles.....	79
Figure 4. 4: Mean score for reliability	80
Figure 4. 5: Mean score for responsiveness	82
Figure 4. 6: Mean score for assurance.....	83
Figure 4. 7: Mean score for empathy.....	84
Figure 4. 8: overall mean score for dimension	85

LIST OF TABLES

Table 2. 1: Ten original service quality dimensions	29
Table 4. 1: Gender groups	65
Table 4. 2: Age groups	65
Table 4. 3: Respondent's age and gender	66
Table 4. 4: Tangibles	68
Table 4. 5: Reliability	70
Table 4. 6: Responsiveness	72
Table 4. 7: Assurance	73
Table 4. 8: Empathy	75
Table 4. 9: Cronbach's Alpha	76
Table 4. 10: KMO and Bartlett's Test	77
Table 4. 11: Rotated Component Matrix.....	78
Table 4. 12: Mean score for Tangibles	80
Table 4. 13: Mean score for reliability.....	81
Table 4. 14: Mean score for responsiveness.....	82
Table 4. 15: Mean score for assurance	83
Table 4. 16: Mean score for empathy.....	84
Table 4. 17: overall mean score for dimension.....	85
Table 4. 18: T-Test Scores.....	87
Table 4. 19: Chi-Square Test	90

CHAPTER ONE

INTRODUCTION

1.1 INTRODUCTION

This chapter highlights the rationale for this study and provides an overview of the research problem, objectives and the research methodology that guides the study. The delimitations, as well as an overview of the study, are also outlined in this chapter.

1.2 CONTEXT OF THE STUDY

The importance of providing quality healthcare service delivery and understanding the patient's perceptions and expectations is widely acknowledged by the public and the private sector. Due to shortage of registered Medical Orthotists and Prosthetists (MOP) in South Africa, the number of physically challenged patients who require these services increase daily (KwaZulu-Natal Department of Health 2014). Many patients depend on government hospitals to be assisted, which usually can take over a year. The partnership between Durban University of Technology (DUT) and KwaZulu-Natal Department of Health (KZNDOH) aim to increase the number of registered orthotists and prosthetists (O and P), so that patients will no longer have to wait for more than a year to receive prosthetic devices.

Customer service quality is critical at the medical orthotics and prosthetics for growth and sustenance. The orthotics and prosthetics (O and P) profession is a rapidly growing industry worldwide. Afthinos, Theodorakis and Nassis, (2005) state that the health industry has become very competitive and specialist need to focus their attention on patient satisfaction. The interest of customer service and customer satisfaction has considerably grown over the last decades due to competition in the health sector specifically the orthotics and prosthetics profession and this has driven line managers into observing better approaches to be compelling and enhance service. Zeithaml, Bitner and Gremler (2006) suggest that great service quality entices more patients to the department and this leads to increased returns. According to (Harris, 2003) patients have turned out to be increasingly refined in the manner in which they scan for data and settle on appropriate choices. Patients' needs an environment that will be easy to understand and peaceful in order to improve their decision. Medical orthotist and prosthetist require data so as to screen

patients' needs in a more affordable way so as to live up to their perception and expectations of service quality. Berry and Parasuraman (2012:10) express that service quality ought to be invigorated all through an organisation, as the current monetary condition has turned out to be progressively focused. The point of this investigation is to learn patients' perceptions of service quality at Medical Orthotics and Prosthetics department and to propose to the management the methods for enhancing the productivity and adequacy of service quality into tending to any issues affecting the delivering of service in this department. In doing so, the department will maintain the existing patients' and assist more patients' who are physically defied.

1.3 PROBLEM STATEMENT

The existence of any industry does not only depend on customer retention as well as on the capacity to fulfilling patients' needs proficiently. There has been a few investigations directed on general parts of consumer satisfaction and service quality in different businesses. There gives off an impression of being no noteworthy investigation on how customer service quality effects on patients perceptions on service quality in Orthotics and Prosthetics. Patients are primary customers of Medical Orthotics and Prosthetics and they are winding up progressively mindful of their purchaser rights and of the gaps between their expectation for service delivery and the genuine delivered service. Learning on service quality appraisals made by patients at the department could empower Orthotists and Prosthetists to screen patients' needs and channel their questions to the correct department with the end goal for patients to be effortlessly helped. There is a requirement for enrolled Orthotist and Prosthetist in South Africa, so as to dispense with the trusting that patients will receive their medical devices. Zeithaml, Bitner, and Gremler (2013:138) affirm that if an association does not lead legitimate statistical surveying on consumer satisfaction and service quality, they may fail in giving patients demands.

1.4 AIM AND OBJECTIVES OF THIS STUDY

The aim of this investigation is to survey patients' perceptions of service quality in Medical Orthotics and Prosthetics department at a selected university. The objectives of this investigation are as per the following;

- To identify patients' expectations in terms of the delivered services provided at Medical Orthotics and Prosthetics department;
- To determine the patients' perceptions of the delivered services provided at the Medical Orthotics and Prosthetics department; and
- To evaluate the Gap between patients' expectations and perceptions of service quality, utilising the modified SERVQUAL model;

1.5 RATIONALE OF THE STUDY

The medical orthotics and prosthetics was chosen as the subject of the research on patients' perception on service quality based on the fact that South Africa is experiencing a shortage of registered orthotist and prosthetist. The number of amputees has considerably grown, with only one centre that manufactures and cater for all patient in the whole KZN has put a strain at the Orthopaedic centre in Wentworth as patients has to wait for more than a year to receive prosthetic device. Service quality plays an important role in patient satisfaction. Harris (2014) states that if an organisation or customer are reluctant to focus on spending money on investigation this can negatively impact customer service quality perceptions as this may improve customer service. In this manner, the adequacy in administration quality will support long haul accomplishment for the department. This investigation may possibly induce awareness amongst orthotists and prosthetists (O and P) with regards to the chances of the gaps between the expected and perceived services delivered to patients and assist in the improvement of identifying existing patient problems, service delivery and ensure sustainability in developing strategies to adapt appropriate patient service practices.

1.6 LIMITATIONS OF THE STUDY

This investigation was restricted to the Medical Orthotics and Prosthetics department at a selected university, due to time constrains and budget allocation, the results cannot be generalised to all other orthopaedic centres. This study is substantial for the period in which the investigation was being led, because of new technological progressions and advancements.

1.7 RESEARCH METHODOLOGY

- **STUDY TYPE**

The research was quantitative in nature. To assess and analyse the information, the descriptive and inferential statistics techniques were used. The researcher will evaluate the patient's perception of service quality at Medical Orthotics and Prosthetics Department at a selected university in KwaZulu-Natal. Creswell (2008:145) recommends that quantitative strategies are commonly worried about checking and estimating.

- **TARGET POPULATION**

As indicated by Kumar (2014:227) characterises target population as a gathering of items, occurrences or people having regular qualities that the analyst is keen on examining, it can likewise be characterised as the total of all cases that fit in with some assigned arrangement of particular provisions. Kothari and Garg (2013:20) suggest that a target population can be generalised. According to (Smith, 2012) population validity is of extreme importance in attitude surveys and in order to prevent biased results a representative sample must be obtained. According to the records of the Medical Orthotics and Prosthetics department (MOP), there are currently 150 patients assisted by the department with artificial devices. These patients are amputees as a result of different incidents which includes car accidents and diabetes. The target population for this study are patients who were assisted by the MOP department. The selected department was selected using non-probability convenience sampling.

- **DATA COLLECTION**

Creswell (2014:95) states that the importance of collecting data is to acquire good overall idea of how a process works before any study is carried out and that adequate tools are available. Moreover, all operational staff should completely comprehend what is happening and what is expected of them. The information gathered ought to precisely mirror the execution of the procedure.

Permission to conduct the study was allowed by the Head of Department (HOD) in the Medical Orthotics and Prosthetics department (MOP) to conduct research with patients assisted by the department. Orthotist and Prosthetist

trainees were selected to assist patients to administer questionnaire. Punch (2014) states that polls are pre-planned arrangement of inquiries to which respondent record their answers, as a rule with rather or firmly characterised options. A letter of information recognising confidentiality was additionally given to the patients and was gathered in a similar way.

The Cronbach's Alpha was utilised to measure reliability. To guarantee validity and reliability the adopted SERVQUAL instrument was utilised to regulate the surveys.

1.8 STRUCTURE OF THE STUDY

Chapter Outline

This dissertation is presented in five chapters.

Chapter One: Introduction

The first chapter introduces an overview on Patients Perception of Service Quality in Medical Orthotics and Prosthetics. The aim and the objectives of the study are stated, the research problem, scope of the study, rationale of the study and research methodology are also outlined.

Chapter Two: Literature Review

This chapter provides the literature review which commences with defining key terms used in the study. This chapter also introduces the wider view of the patient's perception of Service Quality in Medical Orthotics and Prosthetics.

Chapter Three: Research Methodology

Chapter three outlines the research methodology used for data collection for this study and the supporting reasons for adopting various approaches and employing a combination of data collection techniques. A brief description of the various participants involved in the study is provided and the study limitations are presented.

Chapter Four: Data Analysis and Presentation of Results

Chapter four focuses on data analysis and presents the results by the use of tables and graphs.

Chapter Five: Conclusions and Recommendations

Chapter five provides the recommendations and limitations based on the findings of the study. Future research recommendations are also highlighted.

1.9 CONCLUSION

Chapter one focuses on service quality background of Orthotics and Prosthetics department at a selected university. It also highlighted the study rationale of patients' perceptions of service quality at the MOP department.

Chapter two contains the literature of Orthotics and Prosthetics patient service quality.

LITERATURE REVIEW

CHAPTER TWO

2.1 INTRODUCTION

This chapter contains the literature of service delivery and gives an overview of customer perceptions and expectations of the service delivered. Service quality and its unique characteristics has gained importance in the last decades. The importance of customer service and the key issues concerned is also discussed. The five service quality dimensions, developed by Parasuraman, Zeithaml, and Berry were also presented in this chapter, which patients can use when measuring service quality. The final section in this chapter discusses the GAP's analysis.

2.2 Defining customer

Dijulius (2015:10) characterises a customer as a person, or association which buys merchandise created by someone else. In this research, the customer refers to all patients referred to the Medical Orthotics and Prosthetics (MOP) department at the selected university.

2.3 Customer attributes

Abosag *et al.* (2019) noted that customer attributes refers to each customer uniqueness. Accordingly, and to distinguish patient attributes, organisations need to more readily comprehend "who" their customers are. Harris (2013) states that organisations tend to attempt to group their customers can according to their demographic and filmographic information to enable them to serve the customers more appropriately. Nowadays, organisations need to understand their customers' needs and provide the best service quality (Hill and Alexander 2017).

2.4 Customer Satisfaction

Chandra and Rao (2013) describe patient satisfaction as a crucial factor information for patient desires for future purchases. Robert (2012) proposes that satisfied patients will most likely converse with others about their great encounters. This reality, particularly in the Middle Eastern societies, where the public activity has been formed in a way that social correspondence with other individuals improves the

general public, is increasingly critical. Parasuraman (1991) expresses that fulfilment is a choice made after understanding while quality isn't the equivalent. Then again, in fulfilment writing, desires for products is "would", while in administration quality writing, desires for merchandise is "should" (Machado and Diggines, 2012). Plus, Hudson (2013) expresses that there is no experience required for assessing administration quality, administration can be assessment dependent on the information about the specialist organisation, from customer's very own involvement.

Various studies completed on consumer satisfaction on service quality delineates that satisfaction results in customer service quality (Parasuraman 1988). So also, Eliason (2012) affirms that there is a connection between consumer satisfaction and service quality.

2.4.1 Customer Satisfaction and Service Quality

In connection to customer satisfaction and service quality, authors have been progressively itemised about the significance of customer satisfaction and service quality. Patient satisfaction and service quality share certain viewpoints, yet satisfaction for the most part is a more extensive idea, while benefit quality spotlights explicitly on measurements of service quality (Wilson, 2008:78). Jain and Sinha (2010) propose that since customer satisfaction has been viewed as dependent on the client's understanding on a specific service experience this is in accordance with the way that benefit quality is a determinant of customer satisfaction. Machado and Diggines (2012) define consumer satisfaction as a specific transaction between the actual service and expected service. This is in accordance with the possibility of Zeithaml (2010) in regards to the connection between consumer loyalty and service quality. Robert (2012) proposes that benefit quality is predecessor to consumer loyalty paying little heed to whether these develops were explicit. The investigations led by Thomas (2013); Bruhn and Georgi (2009) bolster the past examinations on patient satisfaction came because of service quality.

Zeithaml (2010) express that despite the fact that different factors, for example, cost and item quality can influence consumer loyalty and saw benefit quality. The past investigations led has demonstrated that benefit quality and consumer loyalty are connected from their definitions to the associations with different angles in the association. Parasuraman (1985) consents to the way that benefit quality decides

consumer loyalty when seen benefit quality is high, it prompts increment customer satisfaction. The creators understood that the thought raised by Parasuraman (1998) and they recognised that customer satisfaction depends on the dimension of administration quality that is given by the specialist organisations and upheld this was by Saravana and Rao (2007:436), Lee (2000:226). The affirmation of this relationship has been bolstered by past examination. Prakash and Mohanty (2013) portray satisfaction as a man's sentiments of objection because of contrasting an item's result in connection with his or her desires.

The view on customer satisfaction is characterised as the consequence of an insightful and powerful assessment, where some correlation standard is resolved and contrasted with the really seen administration. Customers end up disappointed if the normal administration surpasses the apparent administration. In actuality, if the desire is more than seen benefit, customers swing to be satisfied and satisfied. In this manner, when the apparent administration measures up to desires, customers are neither fulfilled nor disappointed making what is marked as unbiased stage. Hernon (2015) portrays satisfaction as customers' enthusiastic sentiments concerning a specific utilisation encounter. As indicated by Hernon (2015) this implies satisfaction is a result of a psychological appraisal and assessment of what patients' involvement and the subsequent result of the provided services.

Peprah (2014) demonstrate that patients' satisfaction are impacted the accompanying elements the frames of mind of orthotist and prosthetist to patients, to convey provoke benefit immediately, capacity to course data to patients and the availability of patient devices. Parasuraman (1985) depicts consumer loyalty and service quality as the hole between foreseen benefit (patients desires) and saw benefit (patients' discernments). On the off chance that the patients' desire are more prominent than execution, saw quality is respected not exactly palatable and an administration quality hole emerges. This basically does not really imply that the administration is of low quality but instead patient desires have not been met and along these lines tolerant disappointment happens and these would introduce open doors for enhancing administration to live up to patients' desires.

2.4.2 Types of customer satisfaction

Gilbert and Veloutsou (2006:302) report that there are two categories of customer satisfaction that exist; the exchange explicit and by and large fulfilment. The exchange explicit fulfilment identifies with a specific experience with the association, while generally fulfilment is an aggregate build summing fulfilment with explicit administrations of the association with different highlights of the association. The total rating takes after a general demeanour the client has toward the explicit administration given by the association. This generally speaking is moderately steady after some time and less touchy.

2.4.3 Customer satisfaction determinants

According to Zeithaml and Bitner (2010:30), customer satisfaction is inclined by patients' emotional responses, perceptions and their attributions of fairness.

2.4.3.1 Product and service features: The product is essentially impacted by patients' assessment of service rendered. Service provider, for example, the Medical Orthotics and Prosthetics (MOP), the vital item highlights may incorporate service clinic facility, kindness of staff, price, and so forth, (Goodman, 2009). In directing fulfillment contemplates, most associations will decide intends to what the highlights and properties are for their administration and afterward measure view of those items and in addition generally speaking service approval.

2.4.3.2 Patient's sentiments: Patient's feelings likewise influence their view of fulfillment with service advertised. These feelings can be steady or previous feelings. Explicit feelings may likewise be initiated by the utilisation encounter, which, in itself, may impact the patient's fulfillment with the service (Bradberry and Greaves, 2012). The way in which Medical Orthotics and Prosthetics (MOP) department render the service delivery to patients may conceivably impact the patients by and large fulfillment. The feelings, for example, want, amuse, and a feeling of generosity improve patient's fulfillment. Thus, bothersome feelings, for example, bitterness, distress, lament, and outrage lead to lessened consumer loyalty.

2.4.3.3 Attributions for service success or failure: The apparent attributions for service achievement or disappointment possibly impacted by consumer loyalty. At the point when patients are disappointed by a result, they will in general search for the purposes behind their disappointment, and the evaluations of the reasons can impact their fulfillment (Allison, 2015). For instance, if the MOP department neglects to fix patients prostheses, the patients will probably scan for the causes to decide the dimension of fulfillment or disappointment with the MOP department.

2.4.3.4 Perceptions of equity or fairness: patient fulfillment is likewise impacted by view of value and reasonableness. Thoughts of decency are fundamental to the patient's impression of fulfillment with items and services (Micah, 2012:22). For instance, patients at MOP department may create sentiments of disappointment with specialist co-ops on the off chance that they see they are not getting great incentive for cash.

2.4.3.5 Customers, family members, and co-workers: Hill and Allen (2007) describe customer satisfaction as one's own beliefs of the product and service feature. At the MOP department the patients' satisfaction isn't just impacted by individual recognitions, but on the other hand is extraordinarily disposed by the encounters, conduct, and perspectives of different patients.

2.4.4 Measuring customer satisfaction

According to Grönroos and Ravald (2011), the estimation of consumer loyalty is a post-utilisation evaluation by the client about the item or service received. Hyken (2011) affirms that there is a general assertion that the quicker the appraisal is to the genuine service experience, the more exact the evaluation of the service quality. The patient last assessment will in general effect the customer general appraisals more than those characteristics that were progressively far off in time between the service experience and the customer evaluating. Evenson (2012:45) state that a single item measure provide a greater scale insight about customer satisfaction perspective, while multi item measure provide empirically levels based on reliability. Inghiller and Micah (2010) suggests that various aspects of patients' satisfaction are favoured so as to help with clarifying the build of service fulfillment in an effective approach.

2.4.5 Differences between customer satisfaction and service quality

Hernon, Altman, and Dugan (2015), suggest that the contrasts between consumer loyalty and service quality are frequently used interchangeably; this has led to confusion and to misrepresentation of study findings. Satisfaction is an emotional reaction; it might or might not be directly related to the presentation of the department on a specific occasion. Customers can easily be unsatisfied by the answer given because of an unpleasing encounter. Let's assume that there is a small orthotics and prosthetics clinic in a surrounding area. The clinic offers basic quality repairs, materials, and componentry on the stock/request basis only, but at a very reasonable price. This facility is generally clean, but not excessively attractive, and tends to serve patients within two to three weeks wait.

The clinic type of clinic inclines with patients who are attracted to its convenience and price value. The patients would purchase materials on a regular basis when they do not have time to manufacture simply as a replacement for extra labor. These regular patients need to know what to expect from this clinic and, therefore, they are generally satisfied with the price and service. However, they would generally acknowledge that the overall quality of this facility is moderately low compared to most other orthotics and prosthetics clinics.

Therefore, even though the patients' recognised that the clinic's overall service quality is low, if their satisfaction fits within their range of expectations for this clinic they will be satisfied. The other situation might apply when visiting a very expensive private clinic where a patient may recognize the high overall quality of the clinic, but be disappointed on some aspects due to quite high expectations.

2.4.6 Perceived Value

According to Peprah (2014), the overall customer assessment of a product perceptions is established on what is perceived and delivered. Customers evaluate products and services based on quality and satisfaction. The perceived value is closely linked to customer perceptions of benefits received versus cost in terms of monetary, time, and effort. Customers may perceive that an organisation offers good quality, and may be satisfied with their encounter with the organisation. For example, a patient may feel that the staff of MOP department offer excellent quality

service, and the patient may be satisfied with his/her multiple experiences with the staff of MOP department.

2.5 Customer Service Quality

The American Board for Certification in Prosthetics, Orthotics, and Pedorthics (ABC's) Standards require Orthosis and Prosthesis (O and P) providers to assess patient satisfaction with the device and services, patient evaluation of the function of the prosthesis or orthosis, and quality issues at least annually. Therefore, it is important that the department of Medical Orthotics and Prosthetics (MOP) understand patients perceptions of service quality. Harris (2013) prescribes that customer service quality enhances the customer experience if done correctly. Service providers have fluctuating thoughts of what they anticipate from patients' association and must know who their customers are, and attempt to give them exceptional client benefit.

2.6 Customers Expectations of Service Quality

Zeithaml (2006:4) expresses that patients desires are convictions that benefit conveyance that work as reference focuses against which execution is judged. Patients' assumptions regarding what establishes great service fluctuate starting with one business then onto the next and change in connection to distinctively situated specialist organisations in a similar industry (Hernon, Allen and Robert, 2015). With regards to this study, the service given by the department that neglects to meet the desires for patients might be viewed as low quality by that specific patient, while another patient, who did not have such elevated requirements, should think about the service to be of high calibre. It is, thusly, critical for a division, for example, the Medical Orthotics and Prosthetics department (MOP), to make progress toward service quality introduction.

2.7 Zone of Tolerance

The idea of administrations makes reliable administration conveyance troublesome crosswise over patients in similar offices and even a similar administration tolerant starting with one day then onto the next. The degree to which clients will acknowledge this variety is known as the zone of resilience (Rai, 2013:50). An execution that falls beneath the sufficient administration level will cause

disappointment and disappointment, though an execution that surpasses the coveted administration level will satisfy the client. At the point when benefit falls outside this range, clients will either respond emphatically or contrarily (Hoffman and Bateson, 2010). With regards to this examination, a demo might be a patient at the department expecting their prosthetic device to be delivered at least within three weeks since their first visit, this would fall into their zone of resistance, just to receive their prosthetic a lot later, this falls under the satisfactory administration level and bringing disappointment.

2.8 Customer Perceptions of service

Strydom, Jooste, and Cant (2010:84) characterise patient perception as the strategy of conveyance, masterminding and passing on significant data that gives the final product by various perceptions by the customer. Patient impression of service quality is a mind disorientating process. Along these lines, various elements of administration quality have been prescribed by Brady and Cronin (2006). Moreover, SERVQUAL is a standout amongst the most prominent model utilised in service quality, was created by Parasuraman (1988), has been broadly received for clarifying patient impression on service quality.

2.9 Dimensions of Service Quality

Zeithaml, Bitner and Gremler (2006:38) express Customer expectations are beliefs about service delivery that serve as standards against which performance is evaluated whereas customer perceptions are viewed as subjective assessments of actual services experiments through interaction with the providers. Interestingly, convictions about service quality can fill in as measures against which execution is assessed while customer observations are seen as abstract appraisals of real service quality through association with the specialist co-ops SERVQUAL has its hypothetical establishments in the holes show and characterises benefit quality regarding the distinction between customer expectations and execution recognitions on various things.

Five Dimensions of Service Quality:

2.9.1 Reliability: delivering on promises

Dhurup, Singh, and Surujlal (2006:42), portray reliability as a capacity to play out the guaranteed service dependably and precisely. Bruhn and Georgi (2006:52) recommend that reliability assigns the authority's ability to supply the guaranteed yield at the predetermined dimension. The authors notice that reliability is the most critical determinant of impression of service quality among South African patients. Most businesses utilise a blend of physical assets and different measurements to build up a service quality methodology for the business. Suskie (2015:49) propose that an irregularity among guarantee and service conveyance can be the consequence of wrong correspondence from promotions. Yeo (2008) makes reference to that a few businesses oversell their service quality, prompting guarantees that distort their real potential.

The Medical Orthotics and Prosthetics (MOP) department could flaunt about their facility and state of the art equipment and not have such most recent equipment. Service quality organisations, for example, orthopaedic centre is restricted to encounters that happen in the fringes of the department, yet include such facilities as libraries and workshops. Additionally, Medical Orthotics and Prosthetic (MOP) department offer facilities, for example, workshops, and computer access. The general reliability of a service organisation is probably going to be dictated by both the offices and individuals of the help administrations. The degree to which the arrangement of service quality is ceaseless ought to be a decent pointer of reliability. Orthotics and Prosthetics (O and P) give unwavering quality through being in nearness for various years and have demonstrated their abnormal state of service conveyance and guarantee in the restoration division.

2. 9.2 Responsiveness: Being willing to help

According to Ziethaml (2010) responsiveness is characterised as the ability to help patients and deliver prompt service. Along these lines, this measurement accentuations on fixation and expeditiousness in managing patients' solicitations, protestations and issues. It is conveyed to patients by the period of time they have to hold up to be gone to as well. It is vital that the service organisation looks at the

procedure of service delivery from the patient perspective, as opposed to the organisation perspective.

Bruhn and Georgi (2008) further proposes that responsiveness alludes to the organisation capacity to react to and fulfil the patients' desires and readiness to respond rapidly assumes an imperative job. Peppers and Rogers (2011:176) portrays that individual connections have all the earmarks of being a key determinant of perceived service quality. For Medical Orthotics and Prosthetics (MOP) department, supervisors need to give individual interactions by imparting trust in patients. The author's further express that individual interactions enable staff to show their capacity to assist the patients with their questions and challenges.

Kotler and Armstrong (2010) further expand that it is from these interactions that patient's judge the degree to which the organisation thinks about the estimations of their organisation. It is basic that staff is educated about the service quality they speak to as it gives a chance to patients to talk. Suskie (2014) alert that whether these communications happen coordinate or telephonically, the dimension to which the service delivery work force shows the capacity to deal with such issues successfully, and whether they seem to think about taking care of the patients' demand, should affect view of service quality.

2.9.3 Assurance: Inspiring trust and confidence

Kersten and Koch (2016) observes assurance as the patient's information and thought about the capacity of the organisation service to motivate trust and certainty. This measurement is imperative for service delivery which the patients see as including high hazard, or about which they feel unverifiable about their capacity to assess the results, for example, medical and legal services. Trust and certainty might be encapsulated in the individual that connects the patient to the organisation, for instance, in the Medical Orthotics and Prosthetics department setting; this could be the Orthotist and Prosthetist expert who interfaces the patient to the department.

The assurance with regards study would incorporate the conduct of staff at a Medical Orthotics and Prosthetics (MOP) department ingraining certainty to patients about their transaction to the department.

2.9.4 Empathy: Treating customers as individuals

Empathy can be characterised as thinking about the individual and giving complete consideration to a patient (Hudson 2013). The quintessence of sympathy passes on the message that patients are exceptional and unique to understanding their particular needs. Dhurup, Singh, and Surujlal (2006:42) propose that singular consideration must be given to patients by staff while requesting the service. As per Bruhn and Georgi (2006:52), empathy portrays the ability and capacity to react to singular patient's wants. Cudney and Furterer (2013) recommend that occasionally it is challenging for organisations to surpass the patient's requests as this will result to the quantity of patients that the specialist co-op needs to manage can affect the dimension of individual consideration given to every person.

2.9.5 Tangibles: Representing the service physically

Physical assets and visual components of an association will be basic to the productivity and also to the general impression of the association and the brand. Service providers are probably going to utilise physical assets to upgrade their picture and pass on quality support of patients (Zeithaml, Bitner and Gremler, 2006:122). On account of the Medical Orthotics and Prosthetics (MOP) department, it would be basic that the facilities are clean and the equipment is maintained and that the O and P experts are accessible to help patients. Suskie and Ikenberry (2015:189), express that effects refer to the facility, equipment and the individual appearance of staff at Medical Orthotics and Prosthetics (MOP) department. Chowdhary and Prakash (2007:499) express that substantial quality is an essential issue with service that require a progressively noticeable activity. Patient's need greater substantial quality to relate to service where the esteem is made in their physical nearness on the service procedure.

2.10 Service Quality

Service quality can be seen as the aftereffect of patients' comparison of their expectations regarding a service and their view of the manner in which the service has been performed. Concerning orthoses and prostheses services, service quality identifies with issues to do with the stock, which incorporates, patient's appointments, stump measurements, fitting, transport, consumables, componentry,

and work. It can likewise be characterised as the distinction between the patient expectations for service performed preceding the service experience and their view of the service received (Hernon and Altman 2015). Service quality is the conveyance of great or better administration relative than patients' expectations (Zeithaml and Bitner 2006). Service is recognisable, an immaterial movement that is the principle goal of exchange that serves to address the issues of the patients.

Service quality, from the organisation's viewpoint, implies building up prerequisites and particulars. When built up, the quality objective is basically founded on fulfilling patients' needs. From the patients' point of view, service quality means how well the products provided by an organisation meet or surpass patient's expectations (Buswell 2017). With regards to this study, the serving organisation would be the department of Medical Orthotics and Prosthetics (MOP) at a selected university and the customers would be the patients getting service at the department. These days service quality has turned out to be one of the critical determinants in estimating the accomplishment of organisation (Anjum and Perros 2015). Advertisers concur that service quality has really exhibited a noteworthy impact on customers to recognise contending organisations and contribute viably to consumer loyalty (Parasuraman, Zeithaml, and Berry, 1985). Service quality is perceived as a multidimensional build and spins around the possibility that it is the consequence of the examination that customers make between their assumptions regarding service delivery and their impression of the manner in which the service has been performed (Hernon, Altman and Robert, 2015).

2.10.1 Defining Service Quality

According to Brink and Berndt (2005:46), service quality is portrayed as the estimation of how well the item or service of the organisation adjusts to the patients' needs and desires. Customer service can be depicted as the totality of what an organisation does to increase the value of its items and services according to the customers view. Another approach to see this issue is to state that quality is the capacity of an organisation to meet or surpass customer desires. The Medical Orthotics and Prosthetics (MOP) department, as a service provider, will be assessed on a comparative premise and should the department perceive service exceed

expected service, and the department would keep assembling and adjusting prosthetic devices for patients.

2.10.2 Characteristics of Service Quality

Services may be characterised in many ways, with intangibility, inseparability, variability, and perishability traditionally being used to distinguish services from physical products. Other characteristics, which may be used to classify services, include the time and place of service delivery, the level of customization versus standardization, the role of technology in service delivery, durability and the complexity of the devices needed (Buswell, William, and Donne, 2017). The above-mentioned characteristics of services are discussed as follows:

2.10.2.1 Intangibility - is utilised in showcasing to portray the powerlessness to evaluate the esteem picked up from taking part in a movement utilising any unmistakable proof. Usually used to depict services where there is certifiably not a substantial item that the customer can purchase, that can be seen, tasted or contacted. It is likewise viewed as a key normal for services and the most imperative distinction among products and ventures, from which every other contrast rise (Parasuraman, Zeithaml and Berry, 1985). Services qualifies the customer for an affair and this experience can't result in a proprietorship (White, 2012). In addition, services are emotionally assessed, both before purchase and after utilisation (Jobber, 2012). The intangibility of services causes a few issues for advertisers. For instance, services can't be protected and in this manner make issues for new item improvement (Parasuraman, Zeithaml and Berry, 1985). In addition, they can't be effortlessly shown, imparted or estimated. This is the reason advertisers regularly utilise unmistakable pieces of information, for example, physical offices or patients, to enable patients to assess the service before purchase (Fitzsimmons 2013). Advertisers could likewise invigorate the utilisation of verbal correspondence so as to make a solid authoritative picture (Parasuraman, Zeithaml and Berry, 1985).

Services are described by intangibility since they need physical properties that can be detected thus they can't be assessed before the purchase. Despite the fact that the idea of intangibility is now and then helpful, it can't be all around connected to all services amid all phases of service delivery (Wirtz and Lovelock, 2016; Anjum and

Perros, 2015). For instance, a few services include conveying substantial components. As per Bitner and Wilson (2016), notwithstanding the social condition comprising of the specialist organisations and alternate customers, benefit encounters are additionally encompassed by an assembled situation, comprising of the presence of physical offices, equipment, work force, and correspondence materials.

One case of a service that includes tangible components is the Medical Orthotics and Prosthetics department (MOP) clinic room, whose fundamental component, the facility room's tangible. Accordingly, patients can assess the clinic room before they pay for the service. They could likewise assess the clinic building, its offices, the presence of the staff, their frame of mind, the other patient's, etc. Patients could explicitly incline toward a costly service assessed based on the accessibility of predominant substantial components, for example, a progressively exquisite and better-prepared clinic room (Zeithaml and Bitner, 2012). Numerous services include unmistakable procedures and substantial results that patients encounter through their faculties amid the delivery of the service. Getting prosthesis is an affair that could likewise be detected through at least one of the patient's five detects. Numerous services result in tangible outcomes for the patients as well as for their belongings. Precedents incorporate fix and support service, cleaning and stock service. They result in tangible results, for example, a fixed prostheses, clean wraps, materials, and segments. (Wirtz and Lovelock, 2016:290).

2.10.2.2 Inseparability – Services are one of a kind since they are typically given and expended in the meantime in a similar area. As a result of the normal for inseparability, customers have solid assumptions regarding how a service will be given, which can prompt frustration if their expectations are not met. A strong customer service process is the way to dealing with this test successfully. How would you guarantee consumer loyalty? How would you manage miserable customers? On the off chance that you don't have the foggiest idea about the dimension of your customer's fulfillment with your services, ask them! The customers ought to be available amid the generation of numerous service and assume a functioning job in the service advancement process (Evenson, 2012). Likewise, the service provider is engaged with the generation procedure and assumes an imperative job in the fulfillment of the customer. This thought of the indistinguishability of creation and

utilisation advanced the possibility of relationship showcasing in service delivery as dealing with the organisation between the customer and the supplier is essential for viable promoting. The choice, preparing, and remunerating of work force who are the specialist organisations is critical for accomplishing elevated expectations of service quality. What is more, service provider ought to likewise be prepared to maintain a strategic distance from or oversee between customer clashes as the utilisation of the service may occur within the sight of different customers who share their encounters (Cudney and Furterer, 2012).

Inseparability includes the concurrent creation and utilisation which portrays generally services. For quite a while connection has been viewed as a standout amongst the most characterising qualities of services (Keh and Pang, 2010:55-70). Notwithstanding, regardless of the case that the creation and utilisation of services are indistinguishable procedures, there are a great deal of services whose generation and utilisation are not concurrent. They do not require the nearness and the investment of the patients in the service improvement process (Fitzsimmons, 2013:65). Such services are cargo transportation, storeroom, materials, and fix or upkeep of hardware and offices. These administrations are performed in the patient's nonattendance as by acquiring them patients stay away from deliberately performing or being associated with such assignments. They will pay cash to spare time and exertion and to have a pro show improvement over they would (Bitner and Wilson, 2016). These services are purposely isolated and are created just without patients. They are performed either at an alternate area or at times they are planned when the patients are nowhere to be found. Leaving a thing or offering directions to the service provider does not include the interest of the patient in the genuine creation of the service.

Additionally, the utilisation of the advantages of these services can just show up at some point after generation has been finished. Now and again, utilisation of advantages really goes before creation (Zeithaml and Bitner, 2012). For instance, at the Medical Orthotics and Prosthetics department (MOP) when a patient arrives for casting, the specialist will check if the patient stump is in great condition and casting might or might not continue until a few days after the fact. There are additionally different services where patients are frequently missing amid creation, for example, adjustment and amendment (Jenkins and Jones, 2014:50). Advances in data

innovation and media communications, for example, the Internet, make it conceivable to isolate the customers from the creation of numerous data based services (Hernon and Altman, 2015).

2.10.2.3 Perishability - implies that services cannot be stocked and be saved for future use (Parasuraman, Zeithaml and Berry, 1985). Services are exhibitions that cannot be put away. They ought to be expended when they are delivered (Miettinen and Valtonen, 2012). For instance, estimations of another patient's casting cannot be utilised for another patient's device. In the event that a service is not utilised when accessible, the service limit is lost (Frei and Morriss, 2012). Then again, the department cannot supply prostheses on the off chance that they do not have segments. Therefore, the hardest errand of service organisation is to coordinate free market activity (Zeithaml, 2006). Once in a while request surpasses most extreme accessible supply or request surpasses ideal supply level. A portion of the conceivable techniques to coordinate free market activity incorporate distinctive estimating as per the pinnacle time frame, creating non-top interest, creating reservation frameworks and correlative services, using learners or outsiders, sharing limit, getting ready ahead of time for extension Zeithaml (2006).

The workshop building store o machine/equipment while the clinic room store materials. These could be put away before utilisation. Be that as it may, they can't be put away after generation. Services could likewise be stocked in information and individuals (Lovelock and Wirtz, 2010:50). Instructive services is a case of this. Understudies store the learning they picked up in college forever. Some data based services could be stocked in frameworks. These are instructive, excitement, data, and religious services (Lovelock and Wirtz, 2016:546). They could be stocked by taking patients estimations for the utilisation of clinical tests or by changing them into a reusable shape. In these cases, the right patient estimations yield is exceptionally solid and the learners can re-take a shot at patients' prostheses again and again. The idea of the perishability of service has been significantly more addressed with the advances in data innovation and correspondences.

2.10.2.4 Variability - reflects the potential for high changeability in the yield of services (Zeithaml, 2010). This is especially dangerous when the service is work concentrated as its execution and quality differ contingent upon the producer. In

addition, distinctive quality can be conveyed by a similar producer relying upon the patient, the time and some different elements (Zeithaml, 2012). This prompts trouble in accomplishing institutionalisation and quality control in services and results in a more prominent perceived chance by customers when purchasing goods. The potential for high change ability in service quality underscores the requirement for watchful determination, preparing, and compensating of staff in service organisation as to build consistency and reliability. Assessment frameworks ought to be produced that enable customers to give an account of their encounters with staff (Zeithaml, 2009). Also, receiving uniform creation techniques and creating inward advertising to advance service quality could prompt more noteworthy consistency (Allen, 2015). The utilisation of dependable equipment and innovation as opposed to human work could likewise help in accomplishing institutionalisation (Sultz and Young, 2013:118).

2.10.2.5 Implications on service quality characteristics

The four special attributes of service quality have been viewed as a fundamental worldview of service marketing for many years. Nonetheless, as of late, their validity has been addressed. Researchers guarantee that these qualities does not recognise service quality from tangible products (Fisk, 2010). As it was shown in Table 2.1, these characteristics are not applicable to all services. They apply just too a few services. It cannot be said that all service have every one of the four qualities. In this way, these attributes are not conventional. In addition, a significant number of the services even have the contrary attributes - substantial quality, connection, perishability, and changeability. In addition, the field of services promoting has extended and there have been significant changes in the division, which have obscured its limits. The qualities of service quality could likewise be considered out-dated because of the advancement of innovation, particularly the utilisation of the Internet (White, 2012:117). Innovation assumes a noteworthy job in altering the course of service advertising. It changes the manner in which service are delivered and sold, (Allen and Sawhney, 2014:68). For instance, supplanting human work by technology, equipment, and quality enhancement frameworks has extraordinarily lessened the reliability of services yield (Coppard and Lohman, 2014:27). The idea of connection and perishability of service has likewise been addressed in view of the advances in innovation and interchanges, for example, the Internet and computerised video and sound. The discoveries that the four attributes of services

are not nonexclusive to all service and circumstances have a few ramifications for showcasing. Hernon and Altman (2010:57) recommend that perhaps the time has come to surrender the field of services advertising and coordinates it with general showcasing. In any case, the four attributes of a services are as yet appropriate to some services classifications and circumstances. Along these lines, another alternative for the advancement of services advertising is to recognise among various sorts of services and not to take a gander at service as a general class. The attributes could in any case be connected to a few service and circumstances when they are important and valuable (Senge and Smith, 2010:140). Another choice for services promoting is to grow new attributes of services that totally recognise services from substantial merchandise with the goal that the field of services showcasing could be saved and could stay significant (Guinane and Davis, 2011:51). A ton of researchers are endeavouring to accomplish this and are scanning for another worldview of services showcasing. Fisk (2010) propose a few favoured bearings of services showcasing that could be pursued. Notwithstanding, the degree and the fate of services advertising are as yet hazy.

The field of service quality advertising was created in the late 1970s so as to recognise the promoting of services from general showcasing. As of not long ago, the fundamental thought of administrations showcasing was that services are not quite the same as tangible goods. The four extraordinary qualities of services were broadly acknowledged among researchers and advertisers (Lovelock and Wirtz, 2014:35). Be that as it may, lately, a few researchers began to scrutinize these all-inclusive attributes of services as they have not been exactly or hypothetically tried. Also, there are such a significant number of instances of exemptions to these attributes that they can't be summed up to all services and settings. The idea of the four one of a kind qualities of services is ending up much progressively incorrect with the adjustments in the field and the advances in innovation and interchanges. In this manner, the field of services promoting needs another worldview with the goal that it could stay significant later on, also.

2.10.2.6 Exceptions on service quality characteristics

The four one of a kind attributes of service seem to have relatively all-inclusive and unchallenged endorsement from the advertising researchers and are rehashed in all settings with no discourse of the fundamental rationale (Vargo and Lusch, 2004).

Nonetheless, these qualities have not been observationally or hypothetically tried. Or maybe they depend on pragmatic experience and perceptions (Edvardsson, 2005). Additionally, there are a ton of precedents that demonstrate that the four interesting qualities of service quality characteristics neglect to sufficiently and consistently recognise them from substantial products (Lovelock and Gummesson, 2004).

Patient satisfaction and service quality are key issues confronting many service activities department. For a tangible item, customers can picture its physical characteristics before purchasing (Zeithaml, 2006). For instance, despite the fact that they play out a comparable 'portability' work one can without much of a stretch legitimise why artificial blades are more costly than the basic artificial leg from their stylish attributes (Evenson, 2012:66). Be that as it may, it is generally progressively hard to analyse social insurance benefit given by two comparative departments, government clinics, and privately owned orthopaedic centres (Somerville, Kumaran and Anderson, 2016). We may, for instance, be vigorously impacted by our own or our companion's involvement. Tuck and McKenzie (2015:97) presume that at last customer recognition will be a deciding element on the viability of a service department.

2.10.3 Knowledge on service quality

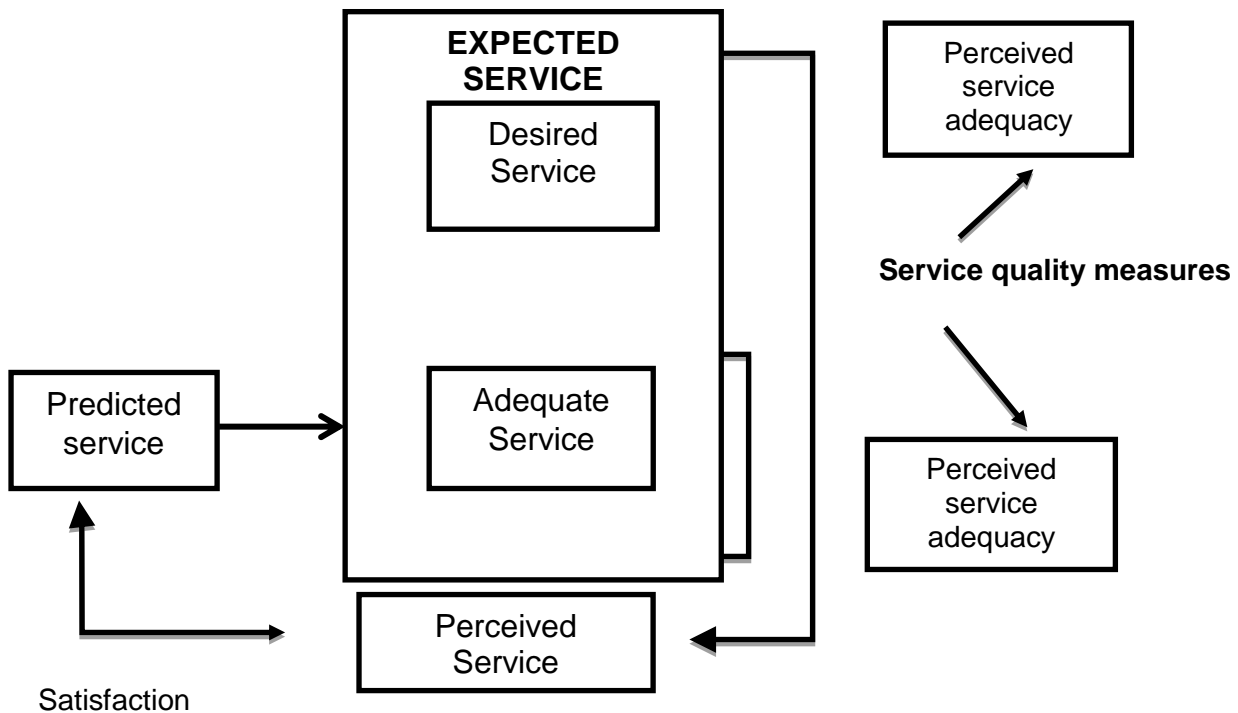
Fall (2012:10), endeavours in characterising and estimating quality have come generally from the retail sector. As per the common Japanese logic, quality is "zero imperfections doing it right the first run through." Ziethaml (2010) and Crosby (1979:2) characterises quality as "conformance to prerequisites." Garvin (2010) measures quality by tallying the rate of "inside" disappointments (those saw before an item leaves the production line) and "outer" disappointments (those brought about in the field after a unit has been introduced. Information of retail quality, be that as it may, is deficient to comprehend service quality. The archived attributes of services, elusiveness, perishability, connection, and fluctuation are recognised for a full comprehension of service quality. Firstly most services are intangible (Martin and Osterling, 2013:51). Since they are exhibitions instead of items, exact assembling particulars concerning casting quality can once in a while be set. Most services cannot be checked, estimated, stocked, tried, and confirmed ahead of time of the deal to guarantee quality. As a result of elusiveness, the organisation may think that

it is hard to see how patients see their services and assess service quality (Zeithaml, Bitner and Gremler, 2013). Also, services, particularly those with high work content, are inconstancy: their execution frequently changes from maker to maker, from patient to tolerant, and from every day. The consistency of conduct from service work force, for instance, casting and rectification quality, is hard to guarantee (Jacobs and Austin, 2013:84) in light of the fact that what the department plans to convey might be completely not quite the same as what the patients get. Thirdly, benefit in these circumstances, the patient's information, portrayal of how the prostheses should look, depiction of side effects, winds up basic to the nature of service execution (Jenkins and Jones, 2014).

2.10.4 Understanding Service Quality

According to Lovelock and Wirtz (2014:35), in the wake of accepting the orthoses or prostheses, patients contrast the service expected with what is really received. Patients choose how fulfilled they are with service delivery and results, and they additionally make decisions about quality. Despite the fact that service quality and patient fulfilment are connected ideas, they are not the very same thing (Nickels and McHugh, 2011). Numerous researchers trust that customers discernments about quality depend on long haul, psychological assessments of an organisation service delivery, while consumer loyalty is a transient enthusiastic response to an explicit service encounter (Anjum and Perros, 2015; Zeithaml and Bitner, 2012). Following service experiences, customers may assess the dimensions of fulfilment or disappointment and may utilise this information to refresh the view of service quality. Patients must experience service quality before they can be fulfilled or disappointed with the result. Convictions about quality don't really reflect individual experience as individuals regularly make quality about services that were never expended, putting together these assessments with respect to remarks by colleagues or on publicising messages (Hernon, Altman and Robert, 2015).

Figure 2. 1: The relationship between expectations, customer satisfaction, and service quality



Source: Lovelock and Wirtz, 2014:35

With reference to Figure 2.1, dealing with a business to advance consumer loyalty is a key basic at numerous organisations, since the expense of fair service quality might be as high as 40% of incomes in some service organisation. Most organisation understand that, by enhancing execution on service traits, consumer loyalty should increase. This expansion should, thusly, lead to more prominent customer maintenance and enhanced quality (Lovelock and Wirtz, 2016).

Quality is something that buyers search for in an offer, which benefit happens to be one (Wiggins and McTighe, 2011:17). It is clear that quality is additionally identified with the estimation of an offer, which could inspire fulfilment or disappointment with respect to the client (McTighe and Tomlison, 2006). Service quality in the management and marketing literature is the degree to which customers view of service meet and additionally surpass their expectations for instance as characterised by Zeithaml (2010), referred to in Bowen (2005:633-637). Service quality can be planned to be the manner by which customers are served in an organisation which could be great or poor. The authors contended that estimating

service quality as the distinction among perceived and expected service was a effective and could make the executives to distinguish gaps in what they offer as services.

The aim of providing quality service is to satisfy customer's needs. Estimating service quality is a superior method to manage whether the services are great or awful and whether the customers will or are happy with it. Haywood (1988:19) records here three segments of service quality, called the 3 "Ps" of service quality. In his investigation, service quality is portrayed as containing three components:

- Physical facilities, procedures, and methodology;
- Personal conduct with respect to serving patients, and;
- Professional judgment with respect to serving patients to get great quality service. (Haywood 1988:9-29).

Haywood (1988:19) states that a proper, carefully adjusted blend of these three components must be accomplished. What establishes a suitable blend, can be controlled by the general degrees of work force, benefit process customisation, contact and connection between the customers and the service procedure. Haywood's (1988) thought of this could be configuration to fit with assessing service quality with the patient viewpoint from the Medical Orthotics and Prosthetics division (MOP). A standout amongst the most helpful estimations of service quality is the elements of the SERVQUAL model.

2.10.5 SERVQUAL

Parasuraman (1985) distinguishes ten elements of service quality; these measurements were found to affect service quality and were viewed as the criteria that were critical to get to customers perceptions and expectations on delivered service (Gawne, 2013).

The SERVQUAL scale which is otherwise called the gap model by Parasuraman and Zeithaml (1988) has turned out to be the ideal measure to quantify the nature of service given to customer when compared to other approaches. This service assessment strategy has been demonstrated steady and solid by a few authors (Thompson and Beale, 2011:48). Whenever perceived or expected service is not

exactly the normal service; it infers not exactly tasteful service quality; and when seen benefit is more than anticipated service, the undeniable derivation is that service quality is more than agreeable (Micah, 2012:22). The possibility of SERVQUAL best fits the assessment of service quality from the patient's point of view. This is on the grounds that when it is expressed "perceived" and "expected" service, it is certain this goes to the individual, who is going to or is expending the service; who unquestionably is the buyer/customer. The first study by Parasuraman (1988) presents ten components of service quality as summarised in Table 2.1.

Table 2. 1: Ten original service quality dimensions

Service Quality Dimension	Definition
Tangibles	Physical indication of the service
Reliability	Involves consistency of performance
Responsiveness	Willingness or readiness of employees to provide service (timeliness of service, giving prompt service)
Competence	Possession of the required skills and knowledge to perform the service
Courtesy	Politeness, respect, consideration, and friendliness of contact personnel
Credibility	Trustworthiness, believability, honesty, and having the customers' best interests at heart
Security	Freedom from danger, risk, and doubt
Access	Approachability and ease of contact
Communication	Keeping customers informed in a language they can understand
Understanding the customer	Making the effort to understand the customers' needs

Source: *Parasuraman, Ziethaml, and Berry, 1991:50*

The joined entirety of contrasts among perceptions and expectations from the five dimensions shapes the worldwide perceived service quality build; (Laroche,

2004:363). Following this view, patients expectations were met through the result dimension (reliability) and surpass it by methods for the outcome dimension (tangibility, assurance, responsiveness and empathy). To affirm the reliability of SERVQUAL model in the assessment of service quality, Zeithaml, (2006:107) states that "service quality is an engaged assessment that reflects the customer's perception of reliability, assurance, responsiveness, empathy, and tangibles" (Zeithaml 2006:106). The authors included that among these dimensions, "reliability" has been indicated reliably to be the most essential dimension in service quality (Zeithaml 2006:106).

Different authors saw the requirement for extra parts of service expectation that are utilitarian and specialised dimension, (Grönroos and Ravald, 2011). The thought was that customers make service assessments dependent on the specialised dimension that is what is delivered and on the useful dimension that is the manner by which, why, who, and when it is delivered, Grönroos (2011:34). In spite of the fact that the components recorded in the SERVQUAL model have been ended up being the principle technique for assessing service quality from the buyer's point of view (Brown, 2011:50), disadvantages in utilising SERVQUAL in estimating service quality has been the reason that the SERVPERF scale was proposed by Cronin and Taylor (1992, referred to in Jain 2004:25) after they raised doubt about the applied premise of the SERVQUAL, having discovered it, prompted disarray with service satisfaction (Jain 2004:25). These specialists disposed of the 'E' for 'expectation' asserting rather that 'P' for 'perception' alone ought to be utilised. The authors implied that higher perceived execution involves higher quality service. Unfortunately, amid this previous century, customers have changed their practices in manners that sometimes fall short for hierarchical conduct. It is indistinct regarding which of SERVQUAL and SERVPERF is predominant in estimating service quality (Jain 2004:25-37). As indicated by Laroche (2004) influenced an evaluation of the dimensionality of ought to and will service expectations. This investigation will embrace the SERVQUAL as it has been tried by numerous researchers.

2.11 Patients as Customers

Torpie (2014:6) states there is no moving beyond the way that human services is a business and that the monetary expense of giving social insurance will dependably must be considered in looking for answers for the medical services emergency. From an absolutely business point of view, concentrating on the primary concern and, in private consideration, on benefit bodes well. The objective of any capital endeavour. Be that as it may, social insurance isn't care for different organisations and patients are not normal for different sorts of customers (Cudney and Ferterer, 2012). 'Customers' are commonly well individuals who appreciate raised status by righteousness of their capability to buy products or services. Patients, then again, are by current definition, not well. Their status is extraordinarily diminished by the loss of their limbs that renders them vulnerable, scared, and depleted (Peppers and Rogers, 2011:176). Notwithstanding these constraining components, patients some of the time need to make vital, regularly unpredictable, choices in a brief timeframe outline. The 'goods' they buy are an arrival to wellbeing and the 'services' they look for frequently require an unspeakable dimension of trust in their 'service provider'. Hyken (2011:69) offers two distinct perspectives of patients as consumers; for example, the individuals who view first time amputee's patients as essential customers relate them as being associated with the information and yield of the manufacturing procedure. Be that as it may, the individuals who view primary patients as new potential cases contend that it is imperative to think about both primary and auxiliary patients as internal customers (Jones, 2014).

2.11.1 Understanding Prosthetics and Orthotics

According to Anwar and Alkhayer (2016:175) orthotic and prosthetic devices, braces, and wheelchairs are basic sorts of devices which encourage or improve patients' mobility. A prosthetic device is a remotely connected device used to make up for the nonappearance or loss of a body structure and body capacities (Murphy, 2013:43). An orthotic device is a remotely connected device to settle, enhance, or re-establish impeded body capacities and structure, identified with the neuromuscular and skeletal framework (Coppard and Lohman, 2014:27; Jacobs and Austin, 2013:84). Both prosthetic and orthotic devices can likewise anticipate medical intricacies and hindrances (Edelstein and Maroz, 2010). Prosthetic and orthotic services

arrangement is identified with the specialised mediations offered to people with disabilities. Prosthetic and Orthotic services are delivered by prosthetists/orthotists who configuration, measure and fit prostheses and orthoses, and by prosthetic/orthotic professionals who make prostheses and orthoses, in a perfect world under the heading of a prosthetist and orthotist. The arrangement of prosthetic and orthotic services requires both restorative and specialised information. As indicated by Lusardi and Nielsen (2012:4) express that service delivery incorporates; tolerant evaluation, casting and estimation, cast alteration and rectification, manufacturing of prosthetic and orthotic devices, bench alignment, static and dynamic arrangement, completing, and product delivery. Prosthetic and Orthotic services likewise need to incorporate development and repairs of devices.

2.11.2 Marketing and Patient Expectations

Other than getting sheltered, viable clinical treatment in a perfect and agreeable condition, most inexperienced patients have nothing to put together their expectations with respect to other than those that are sold to them through advertising (Pollack, 2010). Makers of innovation, pharmaceuticals, and physical civilities spend millions of rands making a case to healthcare organisations that their products and ventures are basic to pulling in patients as "customers", along these lines guaranteeing gainfulness. Advertising specialists move those products and enterprises orthotics and prosthetics focuses, thusly, showcase them to potential patients as being basic to a quality patient affair. Promoting specialists make expectations that orthotics and prosthetics focuses put resources into and that patients at last pay for the services. Their voice stays more intense than that of the patient about what is most vital, (Stankovic and Dukic 2009).

Patients for the most part need what any powerless individual needs, they end up contingent upon other individuals. They need protected, viable, opportune clinical consideration from skilled Orthotist and Prosthetist who can make them feel by and by thought about, incorporated into basic leadership and agreeable (Weiten and Dunn, 2011). Patient's need access to the individuals who know and adore them. Without the incredible impact of promoting, quiet desires would presumably be far easier, more affordable and direct than a lot of what healthcare services are endeavouring to give. Orthotics and Prosthetic focuses set up expectations for costly

hotel style conveniences are conceivably making an interest that is fuelling the unsustainable expense of social insurance (Cudney, 2012:30). While the facts confirm that great prostheses and orthoses, diminishes pressure, and a wonderful physical condition (to give some examples) will enhance the physical component of the patient experience, it is the enthusiastic element of the patient experience that is the most grounded driver of patient fulfilment. One thing that each Orthotics and Prosthetics focus can securely expect is basic to each patient, regardless of whether they know it before they end up in that circumstance or not is to be by and by thought about as a person. The Orthotist and Prosthetist and patient relationship require definitely more than 'customer service'. It is a restorative relationship in it's extremely nature. Customer service can be scripted externally. Any individual who has reached a customer service focus by telephone will perceive the well-known scripted catchphrases.

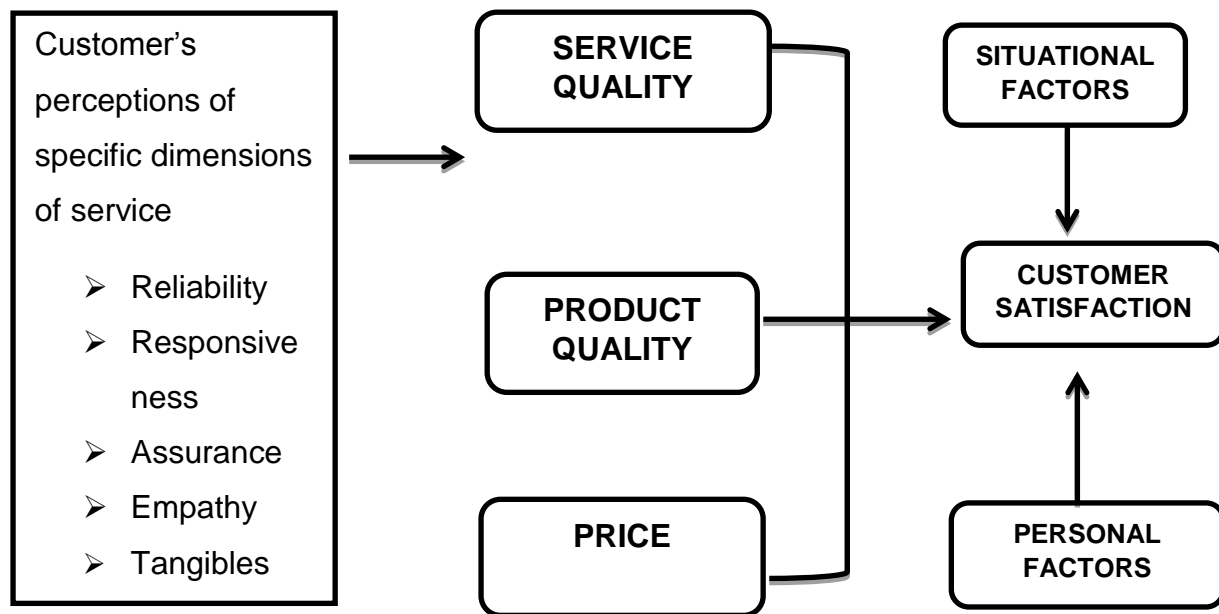
A remedial relationship centres on consideration for an individual more than on service to a customer (Moor, 2010). It requires connection, respect, and sympathy; empathy requires mindfulness. This is the place 'persistent consideration' comes in. To deal with this can be profoundly helpful and candidly scarring. The clinical, relational and relational abilities important to guarantee that the patient is protected, agreeable, thought about and incorporated into treatment arranging is the thing that creates understanding satisfaction as well as appreciation. Appreciation is an amazing help; thankful patients are probably going to be steadfast patients. Staffs, who are remunerated by the appreciation of patients and the thankful affirmation of the executives for the consideration they convey to their work, are probably going to keep putting forth a valiant effort. Appreciative, faithful patients and an inspired, steadfast workforce are, envision, something each human services association goes for, (Talib, Rahman, and Qureshi, 2010).

2.11.3 The Link between Service Quality and Customer Satisfaction

According to Brink and Berndt (2009:50), as indicated by Brink and Berndt (2009:50), patients perceive services as far as the nature of service provided and the satisfaction level achieved. These two ideas, service quality, and patients f satisfaction are the focal point of consideration of organisations since they need to evaluate (measure) them. The explanation behind the emphasis on the nature of

service and patients satisfaction is simply the conviction that organisations can separate by methods for giving better service quality and by and large patient's satisfaction. The linkage between service quality and patients satisfaction is demonstrated in Figure 2.2.

Figure 2. 2: The linkage between service quality and customer satisfaction:



Source: Brink and Berndt, 2009:50

Consumer satisfaction is of incredible significance to advertisers since it is thought to be of noteworthy assurance to rehash deals, positive informal exchange and customer faithfulness (Woodside, 2011). A considerable number of creators have prevailing with regards to demonstrating that consumer loyalty impacts social aims to repurchase from indistinguishable supplier from well as connecting service quality with customer satisfaction (Smith and Houston, 1983, Kotler, 1988). Quiet assessments provided by healthcare on service quality showed as apparent nature of the service, persistent satisfaction with the administration and social aims to come back to a similar supplier (John, 1992).

2.11.4 Primary versus Secondary Patients

Achievement in retaining current patients and attracting in new ones is a definitive means for survival in the restorative health sector. The achievement of retaining or

attracting in patients may result from patient satisfaction with the medical services they get. The satisfaction or disappointment of the patient (medical services patient) with the Medical Orthotics and Prosthetics department (MOP) encounter is straightforwardly identified with the patient's readiness to stay inside a similar specialist organisation or any individual Orthotist and Prosthetist, (Coppard and Lohman, 2014:27). Likewise, disappointed or satisfied patients report the sufficiency of the service they got which may draw in or prevent potential customers/patients to a similar department; suggestion conduct, (Ross, 2012). O and P advertisers are keen on expanding the interest for the services of the organisation and the present patients are prime prospects for return conduct when patients are happy with the division benefit gave this turns into the significance of estimating satisfaction. It is trusted that enhancement of administrations that get low satisfaction appraisals or service that are emphatically associated with the patient's future goals to use the department would enhance understanding satisfaction (Lusadi, Jorge and Neilsen, 2012).

Woodside (2011:45) states that purchaser decisions of explicit service occasions inside service acts impact their general patient satisfaction with the service demonstration and that satisfaction with the service demonstrations impacts by and large buyer satisfaction with the service experience. The creators additionally bolstered the position pushed by Churchill and Surprenant, (1982); Schnedlitz, Morsechett, and Rudolph (2010:142) that satisfaction is a noteworthy result of the showcasing action that joins benefit quality with post-buy marvel, for example, social goals to come back to a similar supplier.

2.11.5 The Benefits of Customer Satisfaction and Service Quality

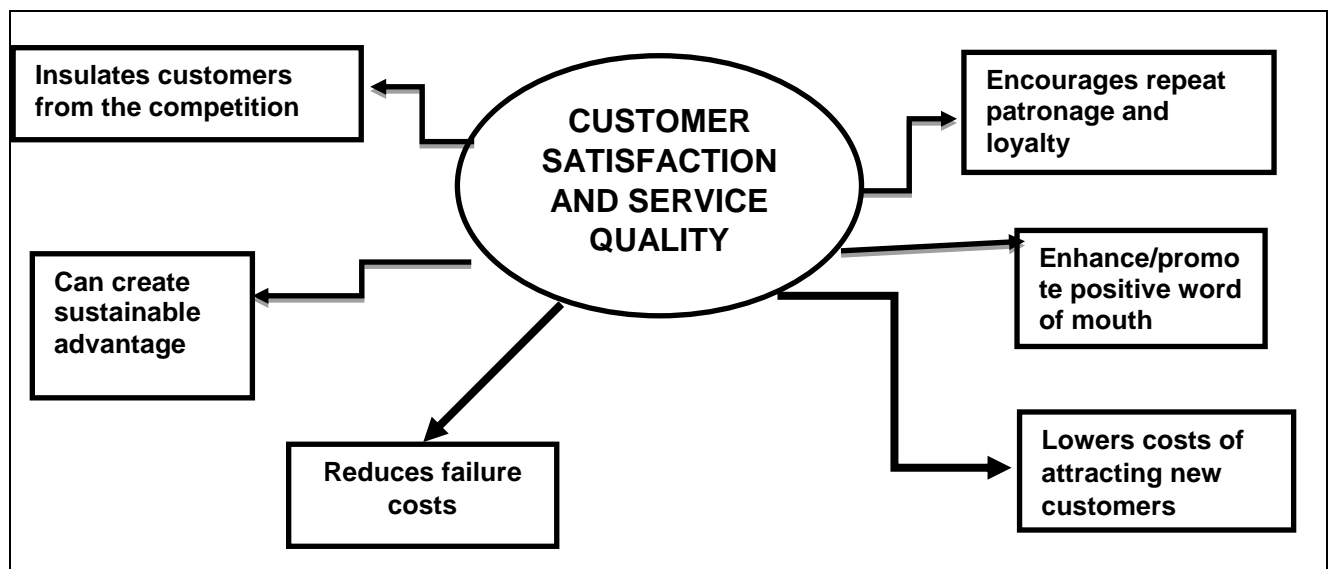
Exceptionally fulfilled customers spread positive verbal exchange and, basically, turn into a mobile, talking ad for an organisation, which brings down the expense of pulling in new customers (Lovelock and Wirtz, 2010). According to Zeithaml and Bitner (2012), organisations cannot dismiss other fundamental business objectives, for example, accomplishing an upper hand or making a benefit. Albeit each effective organisation needs to give a service that satisfies customers, this isn't the main objective. Consumer loyalty gives numerous advantages to an organisations, and more elevated amounts of consumer loyalty lead to more noteworthy customer

faithfulness. Over the long haul, it is more productive to keep great customers than to always pull in and grow new customers to supplant the ones who leave Zeithaml (2006:120). Quality is a critical component of significant worth and it is a key resource of organisations for applying available paying little heed to whether it is an item or a service. Customer perception of quality is an imperative determinant of their purchase decision and the accomplished consumer loyalty.

Quality can be characterised in various routes and from alternate points of view. From the customer's viewpoint, quality is the thing that a customer or an objective section considers being, the capacity of an item or a service to meet or to surpass his expectations (Veljković, 2009:03). The last evaluation of whether the required quality is conveyed or not is given by customers by its acknowledgment or dismissal in the market, thusly, quality is not seen through the utility esteem and the expenses of its creation, however through the accomplished consumer loyalty and the service that is made on this premise. In this manner, quality is most generally characterised as the totality of highlights/attributes of the items or services that have the ability to meet the communicated and verifiable needs (Kotler, 2006:55).

Figure 2. 3: Benefits of customer satisfaction and service quality

Source: Lovelock and Wirtz, 2010:50



Assessing the nature of customers is the aftereffect of advantages that they gain by utilising an item (service) and its picture. Nonetheless, the principle issue that emerges in the organisation of service quality, in service organisations, is that quality

cannot be effectively recognised and estimated because of the explicitness of services (Kumar and Reinartz, 2012:36). In connection to the nature of an item, it is progressively troublesome for customers to gauge equitably the nature of service, because of the intangibility as one of the fundamental qualities. In this way, the authors doesn't give assent with respect to the meaning of service quality. The predominant observation is that the nature of a service is its delivery that is as per the customer's expectations, the aftereffect of customers correlations between expectations identified with a specific service and their recognition on how services ought to be given (Wiggins and McTigh, 2011:89).

The author's dispositions toward the quantity of service quality dimensions are likewise not indistinguishable. Service quality is seen as a multidimensional structure. There is an accord in the sentiment that service quality ought to have three essential components (Belker, McCormick and Topchick, 2012:17); the nature of results, the nature of communication and the nature of service environment.

- The nature of results is a genuine aftereffect of a service contract and it is a fundamental component of a quality service, given that the customer, through its choice to purchase, surveys real advantages that are normal from its utilisation. A customer frequently measures this outcome in a genuinely target way.
- The nature of collaboration alludes to the appraisal of the general connection between a patient and the Medical Orthotics and Prosthetics (MOP) service staff, which changes over a contribution to a yield. This component of value is regularly seen by a patient in a somewhat emotional manner (Evenson, 2012:66).
- The nature of service management, which is the subject of a survey by a patient, is the nature of the service quality, obvious physical or data engineering that gives a visual improvement around an association, its working and services (benefit organisation offices, structure, equipment, and interior). The significance of this component may fluctuate contingent upon the idea of a service action and the force of the association between the staff and service customers (Ding and Keh, 2016:16). The accompanying components of service quality compare to this understanding specialized nature of the administration experience real outcome, utilitarian nature of the

connection between specialist co-op and the administration client and the association's picture, which is the aftereffect of the past two measurements, yet in addition the consequence of the expense of service, correspondence exercises, organization area, openness, aptitudes and conduct of staff (Ghobadian 2012). Delivering of a higher service quality contrasted with an opposition is an objective of each service organisation. It is a necessity for getting an upper hand and accomplishing a steady benefit. Benefit is the aftereffect of surpassing the advantages in connection to the expenses of making quality. More noteworthy advantages are a consequence of higher consumer loyalty, which prompts an expansion sought after, repurchase, and holding of clients. The fundamental goal of the division is to surpass patient's assumptions regarding administration quality (Kotler 2012).

2.12 Understanding the GAP Model

An outstanding service quality so as to get high consumer satisfaction is a crucial issue. It isn't the first occasion when that service quality seems to acquire such significance. Through the last 20 to 25 years, numerous organisations have put resources into service activities and advanced service quality as approaches to separate themselves and in this way increase upper hand (Zeithaml, 2006). It has been the fast improvement and rivalry of service quality in numerous recovery focuses that have made it imperative for organisations to quantify and assess (Powell and Rightmyer, 2011).

The gap between patient's perceptions and expectations for the department management of the patient's expectations and perceptions, the gap between the view of the department management quality particulars, the gap between management quality determinations and the methods for giving managements, the gap between the delivered service and guaranteed service to the patient by means of outer correspondence (Jentleson, 2011). Customer expectations are influenced by the announcements of a departments delegate and its publicising, the gap between a perceived service and an expected service – a gap exists when the patients' misconstrues the service quality (Marshal and Johnson, 2012).

The accompanying dimensions; tangibility (appearance of premises, equipment, personnel and correspondence materials), reliability (capacity to give the guaranteed

services), responsibility (readiness of representatives in the Medical Orthotics and Prosthetics department (MOP) to give a prompt service), security (learning, affability of staff and their capacity to give patient's a feeling of trust and certainty), and empathy (articulations of consideration and regard for every patient) (Parasuraman, 1985; Kotler and Keller 2012). The fundamental preferred standpoint of the SERVQUAL show is that it tends to be effectively connected in an assortment of management enterprises, because of its conceivable adjustment and adjustment to the explicit necessities of each organisation. It is likewise of extraordinary significance for the assessment of the relationship showcasing yield, as it demonstrates the importance of service quality and customer expectations. SERVQUAL model can be utilised for complex examination, as it gives the premise to control of the alleged non-money related factors, for example, consumer loyalty, it empowers checking of an service quality after some time, distinguishing proof of an management segments that are especially great or terrible, benchmarking of results with contenders and the estimation of the general consumer loyalty with a specific service.

As per the feeling of its faultfinders, the SERVQUAL display is centered more around the procedure of a service delivered as opposed to on the procedure of connection with workers and different customers of the organisation, for example, social obligation. Moreover, it is trusted that this model does exclude an estimation of specialised quality measurements. So as to conceptualize the service quality, considering all parts of service quality including those that are as of now set up and those that are forgotten in the nature of service (Press, 2015:90)

The association between service quality and consumer satisfaction is important for understanding the manners by which evaluation is done, if they chose decision (benefit) has met desires and to what degree. The appraisal is abstract and relies upon the specific patient (Buttle and Maklan, 2015:90). It might be founded on discerning and enthusiastic intentions and is liable to changes. The investigation of satisfaction ought to incorporate patient's desires and involvement in the utilisation of the services in a given time or in a shorter timeframe. Patients' expectations are framed based on close to home involvement and data from different sources (May and Lockard, 2011:25). Since the patient's expectations change after some time, even while utilising the service, a few sellers will in general disparage the execution

of services, with the goal that patients could be enchanted. Patients' desires are their convictions about the dimension of service to be given by a servicing organisation and they fill in as the standard with which a servicing organisation looks at its services. So as to comprehend the patient's satisfaction better, it is important to recognize three dimensions of patient's desires as far as service quality;

2.12.1 Level of Patients' expectations

Level 1: This is the most minimal dimension of patients' expectations that are as suppositions, something that is incorporated by an explicit services. For instance, a patient expect that he will get the prostheses around the same time.

Level 2: Patients expectations in connection to the asked for advantages are somewhat higher in contrast with the past dimension. For instance, moreover, the specialist, a patient anticipates that personnel casting will be well disposed and have the capacity to give the device.

Level 3: This dimension of expectations incorporates satisfaction of prerequisites, for example, energy and happiness when utilising a service. For instance, acquiring extra qualities, for example, prices, limits, one of a kind encounters, Satisfaction of the third dimension of expectation implies that an aggregate patient satisfaction is given (TCS – Total Consumer/Customer Satisfaction), the expectations and needs are completely met. By nonstop giving these components, high leave boundaries are made and the most secure approach to guarantee long haul faithfulness. Creation and conveyance of more prominent incentive to patients is the most ideal approach to accomplish add up agreeable to patient. The mission of the cutting edge organisation must be the creation and conveyance of the esteem added services to a patient's.

2.12.2 Effect of Customer Demographics on Service Quality Expectations and Perceptions

SA few researchers considered market division based on customer service quality perceptions and expectations. Jacobsen and Welch (2014) found that customer demographic attributes significantly affect their quality expectations for professional services and not for non-professional services. For non-professional services, the consumer instructive dimension was the main factor that significantly affected

service quality expectations. They examined age, sexual orientation, conjugal status, ethnicity, occupation, instruction, and salary. As per Stratten and Kramer (2014:35) who additionally contemplated this issue, found just three qualities, race, conjugal status, and pay yielded critical contrasts. Webster (1989) analysed expectations for expectations for professional service, (for example, legal advisors and specialists) and non-professional services (different services) utilising the SERVQUAL scale. Discoveries uncovered that statistic attributes were essential while deciding the normal service quality for non-professional services, yet not for expectation services. This showed a need to analyse statistic attributes while assessing service quality in non-professional services settings, for example, retailing.

This study will put together the demographics on gender, age, educational level and a number of visits to the Medical Orthotics and Prosthetics division (MOP).

2.13 The Use of SERVQUAL in Orthotics and Prosthetics

SERVQUAL is proposed as a fitting instrument for service quality estimation with regards to understanding consideration different reasons Lusardi, Jorge, and Neilsen, (2012). Edelstein and Moroz (2010:173) show how the utilisation of SERVQUAL can be utilised to consider patients' satisfaction with five areas of help benefits speculatively identified with confirmation the managers (type of amputation, appointment, waiting period, primary or secondary patient and rehabilitation). He asserted that the model may not suit all areas despite the fact that it holds a guarantee as a methods for assessing the nature of selected support services. Jenkins and Jones (2014:40) likewise utilised the SERVQUAL instrument so as to catch view of services nature of patients getting devices and leaving the department not completely rehabilitated and those individuals who fully rehabilitate be able to utilise the device.

As indicated by O'Neill (2014), utilising SERVQUAL, endeavoured to comprehend the impact of time on patients' perceptions of service quality by running a longitudinal report. The example included the essential patients' in two phases; a) before arrangement process; and b) following multi month; and he found that patients' perceptions of value had disintegrated proposing service quality might be affected by time. Rita and Ganesan (2012) state that SERVQUAL can be used to survey the attitudes of Orthotist and Prosthetist (O and P) partners (including patients, families,

physiotherapist, and specialists). The elements of SERVQUAL are principally identified with the procedure phase of the info procedure yield structure. Goetsch and Davis (2015:10), then again, utilised SERVQUAL to evaluate the perceptions of primary patients (rather than secondary patients), with the aim to serve better the real needs and expectations of services offered to this group of patients.

The authors presumed that SERVQUAL offered helpful bits of knowledge and was a decent beginning stage to gauge wellbeing quality, yet a more top to bottom examination of the areas would be required. Rita and Ganesan (2012) additionally express that the versatility of utilising the SERVQUAL show in the service business by expressing that SERVQUAL has a logical premise. Moreover, by recognizing qualities and shortcomings relating to the elements of service quality, associations can distribute assets to give better service. Customer service and quality are main impetuses in the business network. As indicated by Behzian and Baghishani (2014:28), in their exploration, displayed an improved way to deal with utilising SERVQUAL for estimating patients' satisfaction, the examination includes the utilisation of components concerning patients' services that are questioned and overviewed utilising the SERVQUAL model.

2.14 The benefits of SERVQUAL in Orthotics and Prosthetics

According to Edelstein and Moroz (2010:50), as quality is turning into the key factor in all social statuses, everybody must be instructed in quality standards. Numerous organisations, service, and instructive establishments have executed quality frameworks. In ventures where usage of value frameworks were effective, Agbor (2011) points out that it has brought about the accompanying advantages such as:

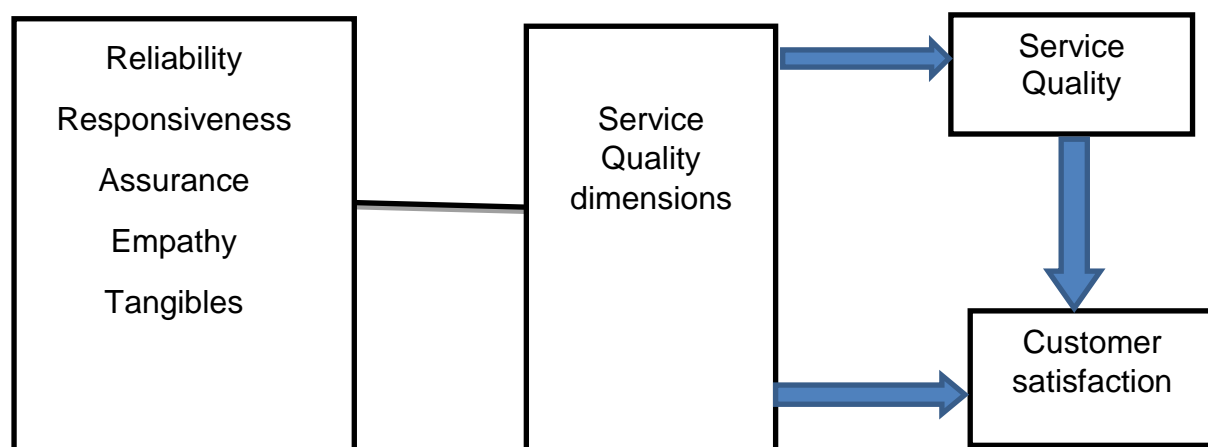
- Reduction in the expense of the item;
- Reduction in production time;
- Increased framework proficiency;
- Increased confidence of staff;
- Increased consumer loyalty; and
- Reduction in protestations from customers, both internal and external.

2.15 Conceptual Framework

The thought from the past literature is that there is a connection between consumer satisfaction and service quality; additionally that service quality could be assessed with the utilisation of five service quality dimensions (Sheilds and Rangarajan, 2013:119). Importantly, studies by Ravith and Riggan (2011:29), and Anderson (2015:91) noted the distinctive perspectives of consumer satisfaction of a customer can either be exchange explicit or combined. The hypothetical system regards consumer satisfaction as exchange explicit. In this way, customers in this study are the individuals who expend the services, satisfaction means customers are craving to keep up a business relationship with the organisation and it is additionally the sentiments of the customers towards the services provided to them by the organisation; while consumer satisfaction in this study is the delights acquired by customers for the services provided to them by the employees of the organisation. It has been demonstrated that apparent service quality is a part of consumer satisfaction (Ziethaml 2006:106).

Additionally, it has been expressed that service quality is the general evaluation of a service by the customers, (Henderson and Johnson, 2011:17). Likewise, the five dimensions of SERVQUAL model has ended up being the fundamental measuring stick utilised by the greater part of the researches in the assessment of service quality (Wilson 2008:79; Hjelm, 2009:5; and Markiewicz and Patrick, 2015:181).

Figure 2. 4: Conceptual framework



Source: Markiewicz and Patrick, 2015:120

This thought produces a presumption that every one of the five dimensions of SERVQUAL model could have an immediate relationship with service quality, Figure 2.4. The inquiry that emerged from this presumption is that; is there a connection among perceived and expected service quality and the five dimensions of SERVQUAL model? Different researchers had demonstrated additionally that there is a connection between consumer satisfaction and service quality (Sivadas and Baker-Prewitt, 2000:73; Liang and Zhang, 2009:113). In addition, the SERVQUAL model has turned out to be the best model to quantify service quality in service sectors particularly with the customer point of view (Wirtz and Lovelock, 2016:50). This thought produces a supposition that the five dimensions of SERVQUAL model could have an immediate relationship with consumer satisfaction, as reflected in Figure 2.4. The inquiries that emerged from this presumption is that; is there a huge connection between consumer satisfaction and service quality dimensions? Is there a critical connection between consumer satisfaction and service quality?

2.16 The relationship between customer satisfaction and Service quality for this study

On the off chance that customer concur that they are satisfied and give the purposes behind their satisfaction with service quality; service quality dimensions has the critical relationship with service quality and consumer satisfaction, at that point an end could be drawn that service quality has a noteworthy relationship with consumer satisfaction and with service quality dimensions (Furtado et al., 2017).

2.17 Measuring Service Quality

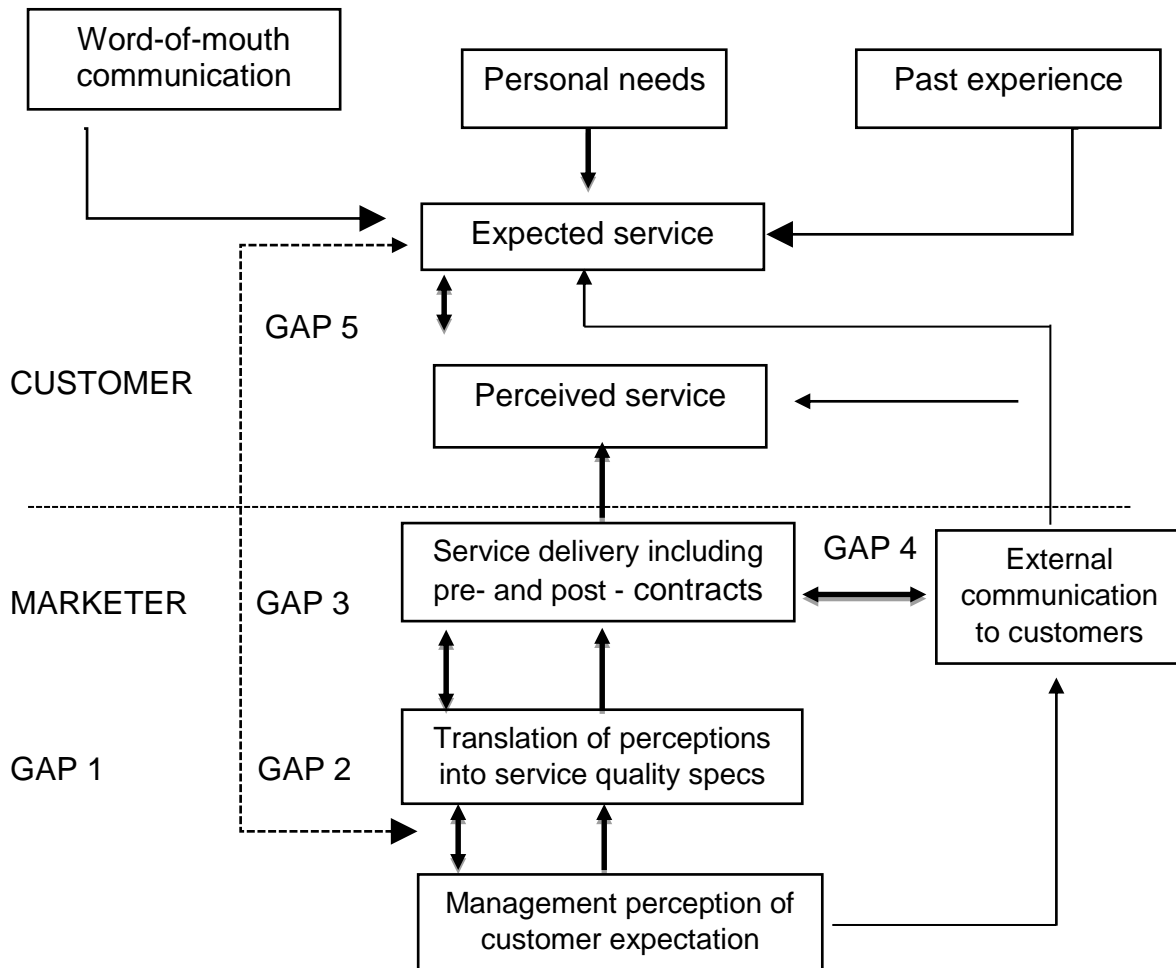
Overseeing service quality is worried about dealing with the gaps among expectations and perceptions with respect to the board, staff, and patients. The most critical gap is that, between the patients' expectations for service and their expectation for the service really delivered, and this is the gap that SERVQUAL is intended to research (Jentleson, 2011). According to Sebastian-Coleman (2013:117) Sebastian-Coleman (2013:117) quality has come to be perceived as a vital instrument for achieving operational proficiency and enhanced business execution. This is valid for both the products and organisation performance. Be that as it may, the issue with the management of service quality in service departments is that quality isn't actually recognisable and quantifiable because of innate attributes of

services which make them unique in relation to produce. Different meanings of the term 'service quality' have been proposed before and, in view of various definitions, diverse scales for estimating service quality have been advanced (Zeithaml and Bitner, 2010). The estimation of service quality estimates the gap between the customer's level of expectation and how well they appraised the service or services.

Estimating service quality in Medical Orthotics and Prosthetics office (MOP) can be both on an explicit task and also a consistent manufacturing of prostheses and orthoses to upgrade and enhance patients' mobility (Micac and Solomon, 2012:22). In spite of the fact that underlying endeavours in characterising and estimating service quality exuded to a great extent from the products segment, a strong establishment for research work in the zone was set down in the mid-eighties by Parasuraman, Zeithaml, and Berry (1985). They were among the most earliest researches to unequivocally call attention to that the idea of value predominant in the products segment is not extendable to the service departments. The following is GAP model of service quality by Zeithaml, Parasuraman, and Berry (1988).

Figure 2. 5: Gap Model Analysis of service quality Gaps Model

(Zeithaml, Parasuraman, and Berry, 1988)



Source: Parasuraman, A, Zeithaml, VA, Berry, LL (1988) A conceptual model of service quality and its implications for future research, *Journal of Marketing*, Vol.49, No 4, pp.41

With reference to figure, this model exhibits how service quality develops. The gap model is extraordinary compared to other gotten and most heuristically profitable commitments to the service literature. The model recognises five key errors or gaps identifying with managerial view of service quality, and undertakings related with service delivery to customers. In the event that nothing is falling through any of these gaps, Medical Orthotics and Prosthetics department (MOP) have an ideal service framework since SERVQUAL results can be utilised to recognise which segments of service are great or awful at the Medical Orthotics and Prosthetics department (MOP), the instrument can be utilised to screen service quality after some time,

organisation can utilise the information gathered through SERVQUAL to enhance its position and live up to patients expectations constantly. Also, the expectations and perceptions results, alongside the statistic information, may encourage viability among various customers (Zeithaml and Bitner 2012:102).

Zeithaml, Bitner, and Gremler (2012:116) argue that customers does not see quality in a one-dimensional manner, yet rather judge quality on different elements significant to the specific circumstance. Parasuraman, Zeithaml, and Berry (1988:27) recognise five explicit dimensions of service quality that apply over an assortment of service settings, including Medical Orthotics and Prosthetic (MOP) department. The five dimensions incorporate reliability, responsiveness, assurance, empathy, and tangibles, have been communicated about in this study.

The model distinguishes five gaps that reason unsuccessful delivery (Kotler and Keller, 2006: 412). This study will feature Gap 5, the gap between perceived service and expected service provided at Medical Orthotics and Prosthetic department (MOP). The significance of gap 5 is featured as the most critical service quality gap, which shapes the premise of this study.

2.18 The Quality of GAP Model Analysis

The service quality gap model conceptualizes apparent service quality as the service quality gap, which is the distinction between the expectation for service quality from an excellent service organisation and the perception of service quality from the present service organisation (Mbewe, 2011). It is contended by Lovelock and Wirtz (2010) that if the board acknowledges the view that quality means reliably meeting or surpassing customers expectation and perceptions, at that point the director's errand is to adjust customer's expectation and perceptions and close any gaps between the two. The SERVQUAL model focuses around the trouble in guaranteeing a high calibre of service for all customers in all circumstances. In particular, it marks gaps where a shortage between the expectation for service level and perception of genuine service delivery may happen (Bok and Dutscher, 2014:291).

Five noteworthy reasons for service quality deficits have been recognised by Zeithaml, Parasuraman, and Berry (1985). As reflected in Figure 2.5 shows, these are known as the Five Gaps.

- **Gap 1:** Between customer's expectations and management's understanding.
- **Gap 2:** Between management's perception of customer's expectations and service quality specifications.
- **Gap 3:** Between service quality specifications and service delivery.
- **Gap 4:** Between service delivery and external communications to customers about service delivery.
- **Gap 5 (patient's gap):** Between customer's expectations and perceived service.

2.18.1 Gap 1: Consumer expectation and management perception

Gap 1, as appeared in Figure 2.5 is the contrast between customer expectation for service and the organisations comprehension of those expectations (Kotler and Keller, 2006:413). Management may surmise that they comprehend what customers need when, truth be told, customers expect something very unique. This circumstance is typically the situation in organisations that does not lead statistical surveying or have insufficient upward correspondence (Gawne, 2013). For instance, specialists at Medical Orthotics and Prosthetics department (MOP) may not comprehend what their patient's expectations are on the grounds that they does not connect specifically with the patients or they does not take proposals from staff that interacts with patients and has a comprehension of patient's expectations. The reverse situation can also occur.

Orthotist and Prosthetist specialists can provide a service they think patient expert when patients do not expect it. In spite of the fact that at first glance, this sounds great in light of the fact that the patient's expectations will likely be surpassed, there are two threats. Firstly, if the patient's expectations are reliably surpassed, in time, these expectations will ascend to meet the service being given. The second risk is that the department might spend money on providing services that patient's does not expect, in this way yielding a negative effect on service delivery (Zeithaml, Bitner and Gremler, 2012).

2.18.2 Gap 2: Management perception and service-quality specification

According to Kotler and Keller (2006:413), Kotler and Keller (2006:413), Gap 2 happens when the executives may accurately see customers' needs yet not set an

execution standard. Conceivable reasons for Gap 2 is the point at which the vital vision, mission, and objectives are not satisfying the customers' needs or the management trusting that patients expectations are preposterous or farfetched (Zeithaml, Bitner and Gremler, 2012). This gap, appeared in Figure 2.5, can be limited by the executives being focused on enhancing service quality by creating customers characterised service norms to meet customers' expectations. For instance, Orthotist and Prosthetist specialists at Medical Orthotics and Prosthetics department (MOP) may build up a quality affirmation program that is intended to meet patient's expectations regarding artificial devices and rehabilitation centres that can further assist.

2.18.3 Gap 3: Service-quality specifications and service delivery

According to Wirtz and Lovelock (2016:546), G Wirtz and Lovelock (2016:546), Gap 3 implies that the quality particulars does not coordinate to the execution in the service production and delivery. Notwithstanding when rules exist for performing services well, top notch benefit execution isn't an assurance and proper assets must help models, for example, patients, materials, and consumables (Harvey, 2015:15). Conceivable reasons for Gap 3, appeared in Figure 2.5, is if staff is inadequately prepared, or reluctant to meet models; or they might be held to clashing guidelines, for example, setting aside opportunity to tune in to customers and serving them quick. In the event that the staff at the Medical Orthotics and Prosthetics department (MOP) provide services as indicated, patients are typically satisfied and their expectations are met.

2.18.4 Gap 4: Service delivery and external communications

According to Crefeld (2011:31), Gap 4 implies that the guarantees given by the market correspondence exercises are not steady with the service delivered. Patient's expectations are influenced by proclamations made by organisations representatives and promotions (Powell and Rightmyer, 2011). There might be disappointment with the service because of the exorbitantly uplifted expectations created through the specialist organisation's correspondence endeavours. Gap 4, appeared in Figure 2.5, can happen by overpromising in publicising or individual moving. Staff at Medical Orthotics and Prosthetics department (MOP) ought not to guarantee benefit that they cannot deliver. In the event that Medical Orthotics and Prosthetics staff

(MOP) overpromise and are not ready to deliver on such guarantees, patients shape a negative view of service quality at Medical Orthotics and Prosthetics department (MOP).

2.18.5 Gap 5: Perceived service and expected service

According to Kotler and Keller (2009: 214), Gap 5 implies that the apparent service is not steady with the normal service. This gap results in low quality. Parasuraman, Zeithaml, and Berry (1988:13) express that the way to deliver quality is to meet or surpass customers' expectations and Gap 5 is characterised as service quality. Authors express that if the executives needs to close the gap among execution and expectations, it is vital to institute methodology for estimating service execution against expectations. Gap 5, appeared in Figure 2.5, and should be shut for an association to prevail over the long haul. Grönroos (2013:133) contends that Gap 5 ought to be negative; it could demonstrate a quality issue, which would draw in awful verbal suggestion, negatively affect the corporate picture and result in lost business for the organisation. A positive gap hole prompts either decidedly affirmed quality or over quality.

Parasuraman (1985) states that Gap 5 is the entirety of the previous four gaps. Consequently, if the management needs to close the gap among performance and expectations, it winds up imperative to plan strategies for estimating service performance against expectations. While alternate gaps assume an imperative job in the delivery of quality, it is Gap 5 which at last should be shut if an organisation is to prevail over the long haul. Inghiller and Solomon (2010:41) express that so as to convey astounding service quality and close the patient gap, it is important to close four internal gaps which are between service providers and customers.

2.19 Service quality delivery system

According to Berry and Beudapudi (2007), benefit conveyance has by and large been characterised as the way toward making an item or service accessible for utilisation. The service quality delivery framework is a key to the entire service framework at Medical Orthotics and Prosthetics department (MOP), Atinga (2011) shows that the service quality framework incorporates not just the tangible components of the server working framework, staff and the physical offices of

Medical Orthotics and Prosthetics department (MOP), yet additionally incorporates introduction to different patients. Service delivery is concerned about whether the service item is given to the patient at the opportune place and time. Lovelock and Wirtz (2016:290) express that a decent service delivery framework ought to be a proceeding with self-amending framework by contrasting and estimating the consequences of the service quality.

2.19.1 The Role of Service Staff in Service Delivery

Numerous services delivered by individuals to the general population continuously, hence, shutting the service performance gap is vigorously reliant on human asset procedures. Frequently, service staff of Medical Orthotics and Prosthetics department (MOP) is the service, and, in all cases, they speak to Medical Orthotics and Prosthetics department (MOP) in patient's eyes. They influence service quality recognitions to an expansive degree through their effect on the five dimensions of service quality. It is basic to coordinate what the patient's needs and needs with service staff's capacities to deliver (Suskie, Stanley and Ikenberry, 2014:49).

The role of service staff is very essential to service operators in any service delivery process, benefit staff can specifically impact the accompanying five dimensions of service quality Parasuraman (1985).

- The appearance and clothing regulation of staff show the tangible dimension of service quality;
- Service staff can thoroughly control the reliability dimension for service quality, as they present and deliver the comparing service regarding service promise;
- Frontline staff straightforwardly demonstrate the reliability dimension of service quality by offering their own readiness to encourage the patient;
- The assurance dimension of service quality is because of the practices of staff in imparting their validity and ingraining trust in patients; and
- Empathy suggests that staff will give individualised consideration regarding encourage the patient.

Subsequently, service organisations should concentrate on the imperative role of service staff and create systems to comprehend HR issues for the viable customers

arranged service and closing the service delivery gap (Wiggins and McTighe, 2011:17).

2.19.2 The Role of the Patient in Service Delivery

According to Mirzaei (2013:2), the patient getting the service and alternate patients in the service condition can all possibly cause an augmenting of Gap 3 in the event that they neglect to play out their roles successfully. Various purposes behind extending the service delivery gaps are proposed; patients do not have a comprehension of their roles; patients are reluctant or unfit to play out their roles; patients are not compensated for good execution; different patients meddle, or advertise fragments are incongruent. Duffy (2011:121), patients, taking an interest in the service delivery process, will share diverse specialist organization outstanding tasks at hand as per patients' capacity and inspiration. Since service patients must take an interest in service delivery, they oftentimes reprimand themselves (in any event incompletely) when things turn out badly. On the off chance that patients trust they are somewhat (or absolutely) to fault for the disappointment, they will be less disappointed with the service organisation than when they trust the supplier is capable and could have stayed away from the issue. Bitner, Fernanda, and Zeithaml (2007:198) express that the role of customers can play in service delivery is that of supporters of their own satisfaction and a definitive nature of the services they get. Powerful customer support can improve the probability that needs are met and that the advantages the customer is looking for are really achieved. Notwithstanding adding to their own satisfaction by enhancing the nature of service delivered to them, a few customers essentially appreciate taking part in service delivery. In this way, customer support in the service procedure can effect on an organisation efficiency, its service quality, and its patient's satisfaction. At the point when customers neglect to play out their roles successfully, they can augment the service delivery gap. For instance, customers need downplaying of their roles; customers are reluctant or unfit to play out their roles; customers are not remunerated for good execution; different customers meddle; or showcase portions are contrary (Abuosi and Atinga 2013:481).

2.19.3 Timing of Service Delivery

Time viewpoints with respect to service delivery are the length of service delivery, the time adaptability, the perpetual quality of service accessibility and the time-slack among request and delivery (Yin, 2010:48)

- The length of service delivery is reliant upon different criteria. The patient's particular needs decide the length of service delivery. The patient or outside factor additionally influences the service delivery length by means of the intricacy of the patient issue (Senge and Smith, 2010:140). Besides, other service qualities have an impact on the length of a service;
- According to Allen (2015:55), a further time part of service delivery is the patient's adaptability with respect to the point of time when the service is delivered. For the most part, services contrast as indicated by whether supplier and patient concede to a specific delivery time or not. All the more explicitly, for a given service time, adaptability can fluctuate contingent upon the patient's ability to restore;
- The manufacturing time prompts a further time dimension of service delivery, the lastingness of service accessibility. This dimension portrays the time stages when the service resources are usable by the patient (Johnston and Clark, 2012:120). The division's picked position with respect to the perpetual quality of service accessibility affects different service showcasing instruments. A lasting service accessibility requires the changeless arrangement of the separate service resources; and
- A last dimension of service timing is the time-slack among request and delivery. There is a period interim, in particular, time-slack, between the patients manufacturing of orthoses or prostheses and real delivery of the device. Repair services, for example, those given by MOP department, are run of the actual service with a period slack among manufacturing and delivery. The significant test for service managers is benefit institutionalisation. The more institutionalised a service is when all is said in done, the more the explicit components of the service are institutionalised, bringing about a shorter time-slack among manufacturing and delivery (May and Lockard, 2011:25).

2.20 CONCLUSION

This chapter showed a review of the literature gathered on the different themes identified with the investigation including consumer satisfaction, quality, roles of staff and patients, SERVQUAL and the gap model. The five dimensions of the model were additionally reviewed. In addition, this part incorporated a discourse of how these dimensions impacted the patient's perceptions inside the zones of resilience and additionally how the zones of resistance could be overseen. Different ideas identifying with customer service quality have additionally been examined. The significance of assessing customers' expectations and perceptions has been talked about regarding assessing service quality. The potential reasons for service quality gaps have been tended to.

The significance of Gap 5, the distinction between patients' expectations and perceptions of service quality is featured as the most vital service quality gap framing the premise of this exploration. This will be utilised by the Medical Orthotics and Prosthetics (MOP) department as the instrument to measure patient's perceptions and expectations. This study is of extraordinary significance to the Medical Orthotics and Prosthetics (MOP) department, as it very well may be the underlying advance towards accomplishing a definitive objectives of outstanding patient's satisfaction, steadfastness, and maintenance. The research methodology for this study will be presented in the next chapter three.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

Chapter two presented the review on customer service quality, dimensions of service quality, understanding Orthotics and Prosthetics and the Gaps model of service quality developed by Parasuraman, Zeithaml and Berry (1988).

This chapter presents the research methodology applied in the study. The research methods include the target population, sampling techniques, sample size, and data collection instrument, as well as the validity and reliability of the study, are described. This study is classified as quantitative. Welman (2013) describes descriptive research as a description of how things are and, in doing so, defines the nature of this study.

Study objectives are as follows;

- To identify patient's expectations in terms of the delivered services provided at Medical Orthotics and Prosthetics department;
- To determine the patients perceptions on the services provided at the Medical Orthotics and Prosthetics department; and
- To evaluate the Gap between patient's expectations and perceptions of service quality, utilising the modified SERVQUAL model;

3.2 TARGET POPULATION

Kumar (2014:227) defines target population as a collection of objects, events or individuals having common characteristics that the researcher is interested in studying, it can also be defined as the aggregate of all cases that conform to some designated set of specifications. Kothari and Garg (2013:20) suggest that target population can be generalised. According to Smith (2012) states that population validity is of extreme importance in attitude surveys and in order to prevent biased results a representative sample must be obtained. According to the records of the Medical Orthotics and Prosthetics department (MOP), there are currently 150 patients assisted by the department with artificial devices. These patients are amputees as a result of different incidents which includes car accidents and

diabetes. The target population for this study are patients who were assisted by the MOP department. The respondents were chosen using convenience sampling.

3.3 SAMPLING TECHNIQUE

Polit and Beck (2012); Zoogah (2014:99) state that sampling should maximise the selected population and to allow for generalisation to be accurate as possible. It is suggested that a portion of selected population may participate in the study. According to Creswell (2014:74) non-probability sampling can be used, despite the availability of a sampling frame. This is due to anticipated problems in locating specific respondents. The advantage of non-probability sampling is that they are less complicated and more economical in terms of time and financial expenses. LoBiondo-Wood and Haber (2013:231) suggest that non-probability sampling may be done on unstructured bases to take advantage of available respondents, without the statistical complexity of a probability sample.

The sampling elements for this study were patients who visited and were assisted by the specialists at the Medical Orthotics and Prosthetics department. The sampling units were patients who received their mobility devices.

Pickard (2013:64) suggests the two steps to sample the population. This study adopted these two steps; sampling units the place where the interviews are conducted, and judgemental sampling is used to gather specialised informed input on the topic using the probability sampling design.

3.4 SAMPLE SELECTION AND SIZE

According to Hulley and Cummings (2013:23), the sample size is vital due to its effect on statistical power to indicate a significant difference. Merriam and Tisdell (2015:73), suggests that one can substitute the word sensitivity for the word power during statistical conclusions.

Data were obtained from current patients transferred by the Wentworth hospital Orthopaedic centre to Medical Orthotics and Prosthetics department (MOP). Convenience sampling was used in selecting 120 respondents who were visiting patients at the MOP clinic. A Cochran sample size formula were used to estimate

the true sample size for the study at a 50% distribution and confidence interval of 95%.

3.5 RESEARCH DESIGN

Creswell (2013:105) states the design process could be seen as the visualisation and planning of the research of the data and the problems encountered in achieving the final outcome of the study. This study was a quantitative and descriptive measuring patients perceptions of service quality at Medical Orthotics and Prosthetics (MOP) at a selected university in KwaZulu–Natal. Leedy and Ormrod (2015:154) explain that the researches use quantitative method to experiment tests to analyse multivariate statistical samples.

3.6 QUESTIONNAIRE DESIGN

According to (Brace, 2013:28) questionnaire design is important to ensure that research questions are addresses accurately and appropriate for statistical analysis for data collected. This study questionnaire was an adaptation of the SERVQUAL instrument developed by Parasuraman, Zeithaml, and Berry (1988). The questionnaire consisted of the standard 22 questions for both perceptions and expectations sections, and a 5 point Likert scale ranging from 1 – strongly disagree, to 5 – strong agree was attached to each question.

Below are the 5 dimensions statement of service quality;

- Tangibles- 1-4: Facility conditions appearance
- Reliability- 5-9: Service performance,
- Responsiveness- 10-13: Willingness to assist and providing prompt service;
- Assurance- 14-17: Inspiring trust and confidence; and
- Empathy- 18-22: Caring and individualised attention

3.7 Questionnaire research objective

A questionnaire should be quality tested repeatedly for the precision of expression objectivity, relevance, and suitability to the problem situation. Important considerations in questionnaire construction are courteousness, simplification and brevity, first impressions, and return postage.

The questionnaire design will be discussed under the following headings (Harris, 2014:35)

- Purpose: The purpose of the questionnaire was to analyse the patient's service at the Medical Orthotics and Prosthetics department (MOP) at a selected University. The information obtained from the research was used in relation to what is proposed by the researcher in the literature study (chapter 2) to reach the final conclusion and recommendations (chapter 5);
- Type of questions: A structured questionnaire was used; and
- Sequence: The order in which the questions drafted relates to the study.

3.7.1 Questionnaire context

The questionnaire was developed utilising an adaptation of the SERVQUAL instrument for assessing service quality (Gast and Ladford, 2014:154). In particular, the questionnaire consists of three sections (see Appendix A).

Section 1: this section was concerned with the general information and background of the respondents, the questions included the respondents' gender, age, racial group, and education level. These questions offered the researcher basic information about the respondents who were interviewed.

Section 2: this section included the respondents' perceptions towards Medical Orthotics and Prosthetics department (MOP) in terms of the frequency and the reason respondents visited the facility or centre.

Section 3: this section included the respondents' expectations towards the Medical Orthotics and Prosthetics department (MOP) patient's service provided in terms of the products and employees' ability.

The cover letter was constructed to accompany the questionnaire, the letter explained the purpose of the study in order to encourage high response rate. The questionnaire cover letter provided the following information;

- The reason for and the topic of the research; and
- Request for the respondent's co-operation in completing and returning the questionnaire.

Leon-Guerrero and Frankfort-Nachmias (2014:119) state that the questionnaire cover letter should identify the person/s conducting the study, purpose of the study must be fully explained; explain to respondents on why it is important to answer the questionnaire and assure respondents that the information will be confidential.

3.7.2 Type of questions

The questionnaire was kept short to suit the face to face method and to improve the response rate the questionnaire was edited by the supervisor to ensure grammatical errors. Factual questions and opinion questions were included in the questionnaire.

3.7.2.1 Factual questions

Kirby and Doran (2016:116) state that factual questions are mostly designed to stimulate information related to the background of the respondents. Questions such as; “what is your gender?” “What is your age?” were included in the questionnaire. Factual questions included questions one to six in the questionnaire.

3.7.2.2 Opinion questions

In terms of opinion questions, the following formats were included in developing the questionnaire; rating scale and ranking. These were selected to specifically test respondent’s attitudes. Patten (2014:65) suggest that the rating scale is one of the most common formats for questioning respondents on their views. These scales are regarded as the checklist format, except the respondent has the choice to express their degree of agreement or disagreement on a particular scale.

The ranking format is used when the respondent is asked to place a set of attitudes or objects in the ranking order indicating their importance, priorities or preferences. There are, however, particular limitations to the number of rankings most people can be expected to carry out. Under normal survey conditions, to put ten objects in rank order is probably as much as can be asked (Patten, 2011:82).

3.8 DATA COLLECTION

According to Fowler (2013:61) the importance of data collection is to acquire an overall picture of how a process performs. It is vital that, before any study is carried out, that standardised instruments, which are adequate for the purpose, are available. Creswell (2014:95) agree that all operational personnel must fully understand what is going on and what is required of them and the data collected should accurately reflect the performance of the process.

The permission to conduct this study was requested from the Head of Department (HOD) of the Medical Orthotics and Prosthetics department. The questionnaires were self- administered questionnaires and SERVQUAL instrument was used to obtain the required data. The questionnaire and consent letter was handed by the Orthotist and Prosthesis trainees (O and P's) to patients, acknowledging confidentiality and these were collected in the same manner.

3.9 DATA ANALYSIS METHODS

3.9.1 Descriptive statistics

Punch and Oancea (2014:309) state that descriptive statistics provide simple summaries of the sample to describe the basic features of the data in a study. Descriptive statistics such as frequency distribution was used to assess the demographic profile of the respondents. Also, measures such as mean and standard deviation were used to depict the extent of customer expectation and perception of the various dimensions of service quality. The mean values represent the average response of all the respondents regarding a particular item on the scale.

3.9.2 Inferential Statistical Analysis

Inferential statistics enable us to determine if the relation between variables or the differences between means or proportions or percentages are real or whether they are more likely to have occurred by chance. Inferential statistics try to infer from the sample data what the population might think, or inferential statistics to make judgments of the probability that an observed difference between groups is a

dependable one or one that might have happened by chance in this study (Horton and Kleinman, 2015:33). Thus, inferential statistics are used to make inferences from our data to more general conditions; we use descriptive statistics simply to describe what is going on in our data (Boslaugh, 2012:46).

According to Creswell (2014:105) inferential statistics allow researchers to infer from the data through analysis the relationship between two variables; differences in a variable amongst different subgroups; and how several independent variables might explain the variance in a dependent variable.

The data analysis was analysed using the latest statistical programme SPSS. The applicable descriptive and inferential analysis techniques were applied.

3.9.3 INSTRUMENT

The SERVQUAL measuring instrument by Parasuraman (1988) was used to measure the gap between customer perception and expectation of service quality in the Medical Orthotics and Prosthetics department (MOP). The key variable measured in the quantitative survey was service quality which comprises five (5) dimensions; Reliability, Responsiveness, Assurance, Tangibility, and Empathy. The scale measured service quality based on patient's perception and expectation along these five (5) dimensions of service quality. The scale was based on the 5-point Likert scale, (1) strongly disagree, (2) disagree, (3) uncertain, (4) agree and (5) strongly agree.

3.10 RELIABILITY

Reliability is concerned with the consistency, stability, and repeatability of the informant's accounts as well as the investigators' ability to collect and record information accurately (Hoy and Adams, 2015). It refers to the ability of a research method to yield consistently the same results over repeated testing periods. In other words, it requires that a researcher using the same or comparable methods obtained the same or comparable results every time he uses the methods on the same or comparable subjects. It further requires that the researcher has developed consistent responses or habits in using the method and scoring or rating its results and that

factors related to subjects and testing procedures have been managed to reduce measurement error (Franses and Paap, 2010).

According to Twycross and Shields (2004:36) these are types of reliability:

- **Stability** - This is when a researcher obtains the same result in repeated administrations or when the same test tools are used on the same sample size more than once, and when there is a reliability coefficient that provides an indication of how reliable the tool is.
- **Homogeneity** - This is a measure of the internal consistency of the scales. Cronbach's alpha is used to measure the reliability of a tool.
- **Equivalence** - This is level of agreement among researchers using the same data collection tool. The ratings of two or more researchers are compared by calculating a correlation coefficient.

Tavakol and Dennick (2011:55), suggest that a reliability analysis is used to test the internal consistency of each factor, for instance, Cronbach's coefficient alpha. Thatcher (2010:122) reports that the internal consistency of reliability is commonly used to measure and assess survey instruments and scales.

3.11 VALIDITY

According to Poynter and Williams (2014), validity in research is concerned with the accuracy and truthfulness of scientific findings. A valid study should demonstrate what actually exists and a valid instrument or measure should actually measure what it is supposed to measure. In contrast (Garson, 2013), state that validity refers to the agreement between the value of a measurement and its accurate value. Poor validity also degrades the precision of a single measurement, and it reduces the ability to characterise relationships between variables in descriptive studies.

Chapman and McDonnell Feit (2013:47) define two major forms of validity that encompass the many types. The internal and external validity, terms are used in most research textbooks and the distinction between these types are applied in qualitative research (Franses and Paap, 2010:10). Internal validity is used to refer to the research findings true reflection of reality rather than being the effects of

unnecessary variables. External validity addresses the extent to which such representations of reality are legitimately applicable across groups.

Furthermore, Wiggins and McTighe (2011:17), state that SERVQUAL does, however, benefit from being a statistically valid instrument as a result of extensive field testing and enhancement. SERVQUAL, therefore, escapes the disadvantage of being perceived by service users and providers as “something that has been invented off the top of the head” or a questionnaire that has been skewed to elicit certain types of response. As a generic and universally applicable instrument, SERVQUAL can also be administered on a repeated, regular basis and used for comparative benchmarking purposes.

3.12 ETHICS

The goal of ethics in this research is to ensure that no one is harmed or suffers adverse consequences from research activities. Researchers need to adhere to ethical procedures in all aspects of design and to conduct the study. Emanuel and Grady (2011:261) state that Ethics are important in the choice of topic, the samples selected, the interventions designed, and the data collection procedures. After data are collected, ethics are of great importance in the analysis and reporting of data

The permission to conduct this study was granted by the Medical Orthotics and Prosthetics (MOP) department in Wentworth Hospital. The study purpose was clearly communicated to respondents and they were assured of their anonymity when completing questionnaires and Orthotist and Prosthetist trainees ensured that respondents were willing to co-operate in completing questionnaires. Statistically, data was accurately computed to prevent skewed or misinterpreted results.

3.13 CONCLUSION

This chapter indicated the steps and procedures that were used to conduct the study. This chapter established a foundation for the study of the next chapter. In this chapter, the research methodology used has been discussed. The discussion of the methodology will allow an easier understanding of the analysis of the data collected in the following chapter. Chapter four is dedicated to data analysis and the presentation of the empirical research results.

CHAPTER FOUR

QUESTIONNAIRE ANALYSIS DISCUSSION OF RESULTS

4.1 INTRODUCTION

This chapter presents the data analysis and discuss the results obtained from questionnaires that were administered at MOP in a selected university in KwaZulu-Natal. The questionnaire was used as the primary tool to collect data and these were distributed to patients assisted at the department. Responses were analysed using SPSS version 24.0. The results obtained are presented in a descriptive and inferential statistical form of graphs, cross-tabulations, correlations and chi-square test values and are interpreted using the p-values.

4.2 The research instrument

The questionnaire was used as the primary tool to collect data and these were distributed to patients assisted at the department. The number of respondents completed the questionnaire was 120. The questionnaire was divided into Three sections which measured various themes are shown below:

- Expectations
- Perceptions
- Biographical data

This study ascertained what patients expected and perceived about Medical Orthotics and Prosthetics (MOP) department. It also identified gaps between expectations and perceptions. Patients were requested to rank their expectations and perceptions in relation to service quality with a five-point Likert scale, thus measuring, respectively an excellent department and the Medical Orthotics and Prosthetics (MOP) service quality.

4.3 DESCRIPTIVE STATISTICS

Nachmias and Guerrero (2014:18), state that descriptive statistics should include processes that help to organise and define data collected from either a sample or a population. Demographic information of the respondents was to gain an understanding of the demographics of the patients visiting the Medical Orthotics and Prosthetics (MOP) department. The characteristics of the sample, include gender, age, highest educational level and the number of visits to the (MOP) department.

The demographic information was used as a basic method for the patient's identification, as shown in table 4.1, 4.2, 4.3 and figure 4.1 and 4.2 respectively.

4.3.1 Gender

The table below divulges the gender dispersal of the respondents, which comprised of 36.7% females and 63.3 % males. The overall indicates male respondents are dominantly than female's respondents. The results reveal that males are predominant visiting and receiving the devices from the department. This could be attributed to more males losing their limbs and receiving artificial devices.

Table 4. 1: Gender groups

		Gender	
		Frequency	Percent
Valid	Male	76	63.3
	Female	44	36.7
	Total	120	100.0

4.3.2 Age group

Table 4.2 discloses that the age dispersal of the respondents in this study: 17.5 % are between 18-25 years, 3.3 % are between 26-35 years, 10.0 % are between 36-45 years, 36.7 % are between 46-55 years and 32.5 % are above 56 years old. The age profile of the studied participants indicates that respondents aged 46-55 are noticed as the dominant group. These results indicate that the number of respondents who visits the (MOP) department were predominantly older people.

Table 4. 2: Age groups

		Age (in years)		
		Frequency		Percent
Valid	18 – 25	21		17.5
	26 – 35	4		3.3
	36 – 45	12		10.0
	46 – 55	44		36.7
	56 and over	39		32.5
	Total	120		100.0

4.3.3 Cross-tabulation of the respondent's age and gender

According to Garson (2012:2) report that cross-tabulation is the analysis of data in tables and is also called contingency table analysis and for three-way tables and higher. The results for cross-tabulation are presented in table 4.3 and shows the overall spread of the ages by gender.

Table 4. 3: Respondent's age and gender

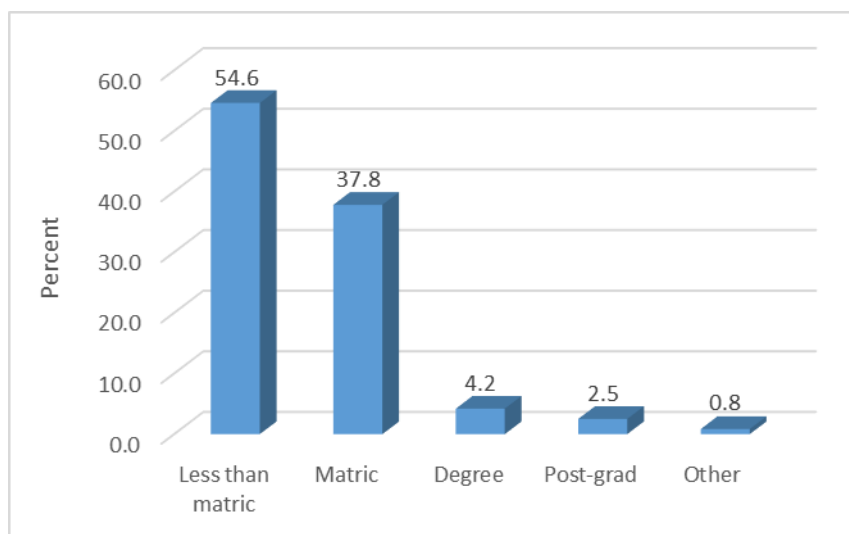
			Gender		Total
			Male	Female	
Age (in years)	18 - 25	Count	7	14	21
		% within Age (in years)	33.3%	66.7%	100.0%
		% within Gender	9.2%	31.8%	17.5%
		% of Total	5.8%	11.7%	17.5%
	26 - 35	Count	4	0	4
		% within Age (in years)	100.0%	0.0%	100.0%
		% within Gender	5.3%	0.0%	3.3%
		% of Total	3.3%	0.0%	3.3%
	36 - 45	Count	7	5	12
		% within Age (in years)	58.3%	41.7%	100.0%
		% within Gender	9.2%	11.4%	10.0%
		% of Total	5.8%	4.2%	10.0%
	46 - 55	Count	30	14	44
		% within Age (in years)	68.2%	31.8%	100.0%
		% within Gender	39.5%	31.8%	36.7%
		% of Total	25.0%	11.7%	36.7%
	56 and over	Count	28	11	39
		% within Age (in years)	71.8%	28.2%	100.0%
		% within Gender	36.8%	25.0%	32.5%
		% of Total	23.3%	9.2%	32.5%
Total		Count	76	44	120
		% within Age (in years)	63.3%	36.7%	100.0%
		% within Gender	100.0%	100.0%	100.0%
		% of Total	63.3%	36.7%	100.0%

Table 4.3 shows the cross-tabulation, in greater structure, of the respondents' age and gender. Overall, the ratio of males to females is approximately 3:2. Within this category 36 to 45 years, 58.3% were male only. This age group formed 5.8% of the total sample. Separately, males were dominant ($p = 0.003$), and by age, the distribution had a higher level of older respondents ($p < 0.001$).

4.3.4 Highest educational level

Figure 4.1 reveals the educational level dispersal of the respondents in this study; less than matric 54.6 %, Matric 37.8 %, Degree 4.2 %, Post-grad 2.5 and 0.8 % for other qualifications. Adat (2013:62), states that education, age, and gender does not have a significant effect on the non-substantive responses. The researcher suggests that answers given were intricate and are not solely based on the respondent's characteristics.

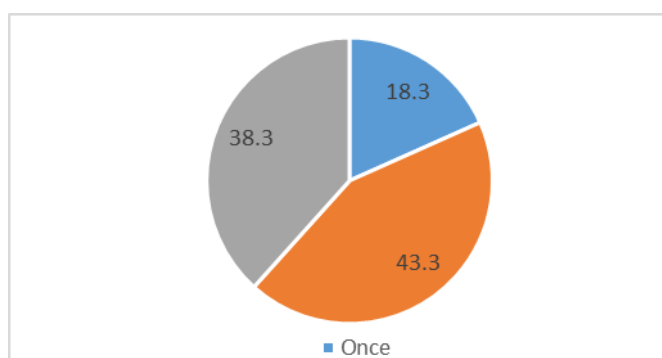
Figure 4. 1 Educational level



4.3.4 Number of the visit to MOP department

The percentages of monthly visits to the (MOP) department are shown in figure 4.2. The results indicate that the percentage of patients visiting the MOP department once a month is 18.3%, twice a month 43.3% and thrice or more a month $\geq 38.3\%$. It is observed that the respondents are predominantly older people. This finding implies that the number of visits has an impact on the frequency of visits to the (MOP) department. Onyemaechi (2012:12) indicates that patients who frequently visit the department, are not favourably inclined towards receiving their devices in time, as it may take up to three weeks for them to receive their devices.

Figure 4. 2 Number of visits



4.4 Patient expectations and perceptions towards MOP department

4.4.1 Tangibles

Jager and du Plooy (2014:3) illustrates that several studies assessing quality provided in private and public healthcare included the influence of tangibles. This has been argued by other authors that the single most important difference between services and products is characterised by the intangibility and this has a sign on the marketing management of services.

Zeithaml, Bitner and Gremler, (2013) confirms that tangibles relates to the physical appearance of the service that patients' will use to evaluate quality.

Table 4. 4: Tangibles

		Expectations						Perceptions					
		SD	D	UN	A	SA	Total	SD	D	UN	A	SA	Total
T1	Excellent orthotics and prosthetics facility should have modern equipment	0.0	0.8	5.0	30.8	63.3	100.0	0.8	0.8	4.2	36.7	57.5	100.0
T2	The physical facilities at an excellent orthotics and prosthetics department should be visually appealing	0.0	0.0	5.8	35.8	58.3	100.0	0.0	0.0	3.3	46.7	50.0	100.0
T3	Staff at medical orthotics and prosthetics should be neat in appearance	0.0	0.0	2.5	37.5	60.0	100.0	0.0	0.8	1.7	42.5	55.0	100.0
T4	Advertising material should be visually appealing at an excellent orthotics and prosthetics department	0.0	2.5	5.8	35.8	55.8	100.0	0.0	4.2	9.2	39.2	47.5	100.0

Table 4.3 shows that 93% of respondents expected that the Medical Orthotics and Prosthetics (MOP) department should have modern equipment, while 94% of respondents perceived that the MOP department has modern equipment. The perceptions exceeded the expectations with regards to the physical facility with modern equipment.

From the above table 4.3 the majority of respondents 94% expected that the facility should be visually appealing, it is also observed that the majority of respondents perceived 96% that the facility is visually appealing. Holmquist (2016:13), states that patients change and grow best when their counselling unfolds in a visually appealing and comfortable environment.

Table 4.4 describe the appearance representation of staff at the facility; it was observed in this study that the respondents expected that staff should be neat in appearance at about 97%. On the other hand, 97% of respondents perceived that the MOP employees are neat in appearance. There were no differences between expectations and perceptions.

Table 4.4 reveals that the majority of respondents 91% expected that advertising material related with the services should be visually displayed, while 86% of respondents perceived that advertising material associated with the service is visually displayed. A minor segment of 15 % was unsure with the statement. A gap between expectation and perception is ostensible. Chen (2015:1) states that materials should be visually displayed and this must be effectively done, in order to be able to maximise sales

4.4.2 Reliability

De Bruin (2010:74) stresses that a test is seen as being reliable when it can be used by a number of different researchers, with consistent results. Reliability is seen as the degree to which a test is free from measurement errors. Ismail (2016:55), confirms that reliability is interpreted as the ability of the supplier to perform the service in a safe and efficient manner. It depicts the consistent performance, free of non-compliance, in which the user can trust. The supplier must comply with what was promised, without the need for rework.

Table 4. 5: Reliability

		Expectations						Perceptions					
		SD	D	UN	A	SA	Total	SD	D	UN	A	SA	Total
R5	When excellent orthotist and prosthetist promise to do something by a certain time, they should do so	0.0	0.0	0.8	36.7	62.5	100.0	0.8	1.7	9.2	58.3	30.0	100.0
R6	When you have a problem, excellent orthotist and prosthetist should show sincere interest in solving it.	0.0	0.0	0.0	40.8	59.2	100.0	1.7	0.8	5.8	61.7	30.0	100.0
R7	Staff at an excellent orthotics and prosthetics department should perform the service right the first time	0.0	0.0	1.7	43.3	55.0	100.0	0.8	0.8	12.5	54.2	31.7	100.0
R8	Excellent orthotist and prosthetist should deliver its services at the times it promises to do so	0.0	0.8	1.7	43.3	54.2	100.0	1.7	3.3	9.2	55.8	30.0	100.0
R9	The staff should inform me about when services will be performed.	0.0	0.8	0.0	42.5	56.7	100.0	0.8	1.7	9.2	51.7	36.7	100.0
R10	Excellent orthotist and prosthetist should insist on error-free records	0.0	0.0	5.8	39.2	55.0	100.0	0.8	2.5	18.3	45.8	32.5	100.0

The majority of respondents in table 4.5, 99% expected that the staff at MOP should keep their promises and meet deadlines once they are set. With regard to perceptions, 88% of the respondents perceived that promises are made to deliver service within a specified time. It is also significant to note that 10% of the respondents were unsure whilst 2% disagreed with this statement. A gap between expectations and perception of 11% exists. This suggests that the respondents were not satisfied with the promises made by the department to manufacture their devices in time.

Table 4.5 illustrates that 100% respondents expects an excellent Orthotist and Prosthetist to listen to patient's problems and show sincere interest when solving it, while 91% of respondents perceived that an excellent Orthotist and Prosthetist listen to patient's problems and show sincere interest when solving it. There is 9% gap between the expectations and perceptions with regard to this statement. This shows that the MOP staffs do try to solve patient's problems and show sincere interest.

This has been viewed as guessing that trial and error problem solving requires clinicians to attempt several different approaches until a solution is found. Intuition is a problem-solving method which has not been considered either sound or legitimate. Until, recently, a study by Benner (2015:329), indicate that intuition appears to be an essential and legitimate aspect of clinical judgement and this is acquired through knowledge and experience and involves a direct apprehension of a situation based upon a similar on dissimilar background. Table 4.5 indicates that the majority of respondents 98% expected that the MOP department should deliver services at the promised time, whilst 85% of the respondents perceived that the MOP staff delivers services at the promised time, 14% of the respondents were unsure about this statement, a minor of 1% disagreed with this statement. Latham (2011:21) states that manufacturing a prosthetic limb may take up to two days to manufacture and deliver. Murphy (2013:23) suggests that the timing depends on how quickly your residual limb fully heals from the surgery. Some individuals receive a temporary prosthesis immediately following amputation or within two to three weeks after surgery. Usually, a prosthetic fitting begins two to six months after surgery.

Reliability table 4.5 shows that the majority of respondents 97% expected that the Orthotist and Prosthetist should deliver services at the promised time, whilst 85% of the respondents perceived that the Orthotist and Prosthetist deliver services at the promised time. However 10% of the respondents were uncertain about this and the 5% disagreed. The gap of 12% between expectations and perceptions warrants attention by the department. Mduzana (2017:8) states that there are many reasons which can cause delays in delivery for prostheses as promised; these include vascular reasons such as, diabetes, gangrene, and the shortage of materials.

The of the respondents 99% expected that the MOP staff should maintain accurate patient's records, while 88% of the respondents perceived that the MOP staff maintains accurate patient records, 9% of respondents were unsure about this statement. This finding reveals that staff at (MOP) need to keep their promises in future.

The above table shows that 94% of the respondents expected staff at the MOP that they should inform patients exactly when the service will be performed, 78% of the respondents perceived that the MOP staff notify patients exactly when a service will

be performed. However, 24% of the respondents were uncertain with the statement. The gap of 15.9% between expectations and perceptions warrants attention by the department. This finding implies that staff at (MOP) need to inform patients exactly when the service will be performed.

4.4.3 Responsiveness

Al-Azzam (2015:47) states that a prompt attention to requests and willingness to assist patient with their queries will provide a flexibility in providing better patient handling service. This contains understanding the needs and requirements of the customer, easy operation time, individual attention provided by the staff and customers' safety in their dealings (Kumar, 2014:27).

Table 4. 6: Responsiveness

		Expectations						Perceptions					
		SD	D	UN	A	SA	Total	SD	D	UN	A	SA	Total
R11	Employees at an excellent orthotics and prosthetics department should give you a prompt service	0.0	0.0	5.8	43.3	50.8	100.0	0.8	2.5	10.8	57.5	28.3	100.0
R12	Employees should always be willing to help you at an excellent orthotics and prosthetics department	0.0	0.8	1.7	42.5	55.0	100.0	0.0	2.5	5.0	60.0	32.5	100.0
R13	Staff at an excellent orthotics and prosthetics department should never too busy to respond to patient requests.	0.0	0.8	3.3	40.8	55.0	100.0	0.0	2.5	9.2	50.8	37.5	100.0

Table 4.6 reflects that the expectations of the majority respondents 94% expected that the employees at an excellent (MOP) department should provide prompt service. With regards to perceptions, 85% of respondents perceived that the employees and MOP department provide prompt service. However, 16% of respondents were unsure, while 3% disagree with the statement.

The above table shows that the majority of respondents 97% expected that MOP employees should always be willing to assist, whilst 92% of the respondents perceived that the MOP employees always willing to assist. The gap of 5% still exists between expectations and perceptions.

Table 4.6 depicts that 95% of the respondents expect that employees at MOP should never be too busy to respond to patients requests. On the other hand, perceptions indicate that 88% of respondents perceived that the MOP staff are always willing to assist patients to their appeals. A minor 12% of respondents were unsure about this statement while 3% of respondents disagreed with this statement. These findings indicate that more focus should be positioned correctly to staff on providing a prompt service. Isomuotia (2014:17) indicate that responsiveness is a major part of customer service quality. To keep patients waiting for no good reason will result in a patients' dissatisfaction and negative perception of service quality (Adat, 2013:70)

4.4.4 Assurance

Saghier (2015:57) states that assurance relates to the seller's capability to deliver the service, in terms of knowledge, politeness and trustworthiness, and be able to inspire trust and confidence. Isomuotia (2014:18) indicates that assurance can be understood by making customers feel safe in their transactions to the facility and this includes employees being polite to patients combined with being skilled and professional

Table 4. 7: Assurance

		Expectations						Perceptions					
		SD	D	UN	A	SA	Total	SD	D	UN	A	SA	Total
A14	The behaviour of employees should instil confidence in you.	0.8	0.0	0.8	45.8	52.5	100.0	0.0	0.0	8.3	49.2	42.5	100.0
A15	You should feel safe in your transactions with an excellent orthotics and prosthetics department.	1.7	2.5	4.2	42.5	49.2	100.0	4.2	1.7	22	38.3	34.3	100.0
A16	Employees at an excellent orthotics and prosthetics department should consistently courteous to patients.	0.0	0.0	5.0	47.5	47.5	100.0	0.0	0.0	8.3	53.3	38.3	100.0
A17	Staff should have the professional knowledge to answer your questions.	0.0	0.0	0.8	46.7	52.5	100.0	0.0	0.0	5.8	50.8	43.3	100.0

From the above table 4.7 the 98% of the respondents expected that staff behaviour should instil confidence. A minor 9% of respondents were unsure whilst 91% perceived that the staff behaviour instils confidence to patients.

The above table indicates that the majority of respondents 91% expected that patients should feel safe in their transaction with MOP department. With regards to perceptions, 72% of respondents perceived that they feel safe at their transaction with MOP department. Interestingly 25% of respondents were uncertain, while 10% disagree with this statement. The 19% gap exists and this warrants attention by the MOP department.

Table 4.7 depicts that 95% of the respondents expected that the staff should be consistently courteous to patients, whilst 91% of respondents, perceived that the staff is consistently courteous to patients. Table 4.7 also shows that 13% of respondents were unsure with the statement.

Furthermore on the above table 4.7 the majority of respondents 99% indicates they expected that staff should have the professional knowledge to answer questions. With regard to perceptions, 94% of respondents perceived that the staff has the professional knowledge to answer questions. A minor 6% of respondents were unsure about the statement.

Overall, two of the statements have larger gaps than the second and the last statement. The fact that the gap for A15 and A17 is the smallest implies that most respondents are safe with their transaction to the MOP department and employees have professional knowledge when dealing with their requests. Adat (2013:71) suggests that organisations need staff to encourage and instil assurance to patients.

4.4.5 Empathy

According to (Qadri, 2015:162) indicate that organisations should give appropriate service to patients and treat patients as an individual, understand their needs and wants.

Table 4. 8: Empathy

		Expectations						Perceptions					
		SD	D	UN	A	SA	Total	SD	D	UN	A	SA	Total
E18	Staff should give personal attention to customers.	0.0	0.0	3.3	47.5	49.2	100.0	0.0	0.0	15	54.2	30.8	100.0
E19	Excellent orthotist and prosthetist should have the patient's best interest at heart.	0.0	0.0	3.3	37.5	59.2	100.0	0.0	0.0	7.5	48.3	44.2	100.0
E20	Staff at an excellent orthotics and prosthetics department should understand the patient's specific needs.	0.0	0.0	0.8	44.2	55.0	100.0	0.0	0.0	7.5	52.5	40.0	100.0
E21	Employees at an excellent orthotics and prosthetics department should give you personal attention.	0.0	0.0	4.2	41.7	54.2	100.0	0.0	0.0	7.5	52.5	40.0	100.0
E22	Excellent orthotist and prosthetist should have convenient business hours.	0.8	0.8	5	46.7	46.7	100.0	0.0	1.7	10.0	55.0	33.3	100.0

Table 4.8 reveals that the majority of respondents 96% expect the staff should give personal attention to patients, whilst 85% perceived that the employees gives undivided attention to patients. However 18% of respondents were unsure about the statement, and this warrants attention by MOP department.

The above table indicates that 96% of respondents expected that staff should have the patient's best interest at heart. With regard to perceptions, 92% of the respondents perceived that staff always have the patient's best interest at heart. However, 10% of respondents were unsure about this statement.

As reflected in Table 4.8 the majority of respondents 99% expected that the staff should understand patient's specific needs, whilst 94% of respondents perceived that the MOP staff understands patient's specific needs. A minor 6% of respondents were unsure about this statement.

Table 4.8 shows that the majority of respondents 95% expected that MOP staff should give personal attention. With regard to perceptions, 92% of respondents perceived that staff at MOP give personal attention. A small segment of 11% of respondents was unsure with the statement.

Table 4.8 reveals that the majority of respondents 93% expected that the MOP department should have convenient operating hours for patients, whilst 88% of respondents perceived that the operating hours are convenient for all patients. However, 15% of respondents were unsure and 3% disagreed with the statement. The findings imply that the respondents are satisfied with the statements that make up this dimension. Respondents believe that staff does show empathy towards patients. Adat (2013:73) states that to show empathy, service providers need to demonstrate that they understand each patients' unique needs.

4.4.6 Inferential Analysis

Ruane (2016:255), specify that inferential statistics are used to make decisions about the probability of an observed difference between groups that is reliable one or that might happen by chance. In the contrast various questions pertaining to this should correlate positively but they should not be perfectly correlated, as this could imply that the identical data was captured.

4.4.7 The results of reliability and validity statistics

Tavokol (2011:53) states that the two most important aspects of precision are reliability and validity. Reliability is computed by taking several measurements on the same subjects, while reliability is the coefficient of 0.70 or higher is considered as "acceptable". Table 4.9 show the Cronbach's alpha score for all the items that constituted the questionnaire and the scores for all sections exceeded the recommended value. This indicates a degree of acceptable, consistent scoring for these sections of the study.

Table 4. 9: Cronbach's Alpha

	Expectation		Perception	
	N		N	
Tangibles	4	0.922	3	0.836
Reliability	6	0.936	6	0.930
Responsiveness	3	0.857	3	0.910
Assurance	4	0.867	4	0.785
Empathy	5	0.915	5	0.889

4.4.8 Factor Analysis

According to Bartholomew, Knott, and Moustaki (2011:80-81) state that factor analysis functions on the view that measurable and observable variables can be reduced to fewer latent variables that share a common variance and are unobservable, which is known as reducing dimensionality and these unobservable factors are not directly measured but are essentially hypothetical constructs that are used to represent variables.

For example, an individual's response to the questions on how to be assisted by the MOP department is influenced by underlying variables such as the hospital that the patient has attended, affordability and the time they have been amputated, and so on. . The answers to the questions are the observed variables. The underlying, influential variables are the factors. A researcher may want to discover the number of factors influencing variables and to analyse which variables 'go together'. Fabrigar and Wegener (2012:228), recommend the following; when the goal of the study is to identify underlying constructs for theory building or to create measurement instruments in which the researcher wishes to make, we argue that common factor analysis (FA) procedures are usually preferable.

The matrix Table 4.11 is headed by a summarised table that reflects the results of KMO and Bartlett's Test Table 4.10. The Kaiser-Meyer-Olkin measure of sampling adequacy should be greater than 0.50 and Bartlett's Test of Sphericity less than 0.05. In all occurrences, the circumstances are satisfied and allows for the factor analysis procedure.

Factor analysis is done only for the Likert scale items. This is explained in Table 4.11 in the rotated component matrix.

Table 4. 10: KMO and Bartlett's Test

		Expectation	Perception
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.883	0.888
Bartlett's Test of Sphericity	Approx. Chi-Square	2650.341	2148.126
	Df	231	231
	Sig.	0.000	0.000

Table 4. 11: Rotated Component Matrix

Dimensions	Rotated Component Matrix									
	Expectation					Perception				
	Component					Component				
	1	2	3	4	5	1	2	3	4	5
Tangible 1	0.346	0.265	0.778	0.164	-0.133	0.106	0.085	0.158	0.118	0.892
Tangible 2	0.296	0.218	0.827	0.201	0.159	0.236	0.205	0.814	0.071	0.061
Tangible 3	0.315	0.155	0.803	0.210	0.220	0.210	0.123	0.816	0.196	0.022
Tangible 4	0.361	0.261	0.711	0.130	0.245	0.116	0.122	0.851	0.153	-0.019
Reliability 5	0.825	0.243	0.340	0.038	0.043	0.788	0.202	0.283	0.178	0.009
Reliability 6	0.759	0.097	0.296	0.152	0.149	0.800	0.265	0.166	0.195	0.021
Reliability 7	0.762	0.185	0.246	0.204	0.049	0.818	0.266	0.114	0.246	0.047
Reliability 8	0.865	0.179	0.163	0.133	0.181	0.875	0.264	0.120	0.095	0.031
Reliability 9	0.805	0.281	0.244	0.114	0.029	0.672	0.293	0.157	0.358	-0.022
Reliability 10	0.709	0.080	0.212	0.439	0.136	0.587	0.365	0.240	0.192	-0.418
Responsiveness 11	0.463	0.384	0.202	0.503	0.196	0.584	0.595	0.201	-0.033	0.024
Responsiveness 12	0.530	0.399	0.050	0.457	0.290	0.510	0.621	0.153	0.241	-0.003
Responsiveness 13	0.211	0.297	0.169	0.743	0.111	0.536	0.637	0.165	0.172	0.000
Assurance 14	0.209	0.513	0.146	0.292	0.588	0.286	0.310	0.247	0.738	0.055
Assurance 15	0.115	0.282	0.155	0.182	0.853	0.118	0.120	0.184	0.545	-0.585
Assurance 16	0.263	0.330	0.180	0.566	0.515	0.387	0.423	0.071	0.596	0.029
Assurance 17	0.269	0.762	0.186	0.233	0.301	0.246	0.388	0.242	0.727	-0.017
Empathy 18	0.092	0.703	0.352	0.400	0.188	0.354	0.746	0.183	0.036	0.020
Empathy 19	0.268	0.834	0.163	0.204	0.152	0.230	0.776	0.107	0.258	-0.045
Empathy 20	0.255	0.743	0.293	0.211	0.219	0.174	0.772	0.034	0.314	0.040
Empathy 21	0.228	0.637	0.212	0.539	0.096	0.150	0.759	0.135	0.362	-0.048
Empathy 22	0.156	0.344	0.290	0.671	0.226	0.357	0.588	0.293	0.184	-0.007

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

With reference to Table 4.11:

- Factor analysis/loading shows inter-correlations between variables and the principal component analysis was used as an extraction method. This minimises the number of variables that have high loading on each factor.
- The items of questions that loaded similarly imply measurement along a similar factor and are effectively measured along the various components.

The statements which constituted reliability perfectly loaded along a single component for Expectations and Perceptions. Tangibles loaded along a single component for Expectations, whilst Responsiveness, Assurance, and Empathy

loaded along with a single component for Perceptions. These sections perfectly measured what it set out to measure.

For Expectations, splitting is was noted along for the two components (sub-themes) for 3 dimensions, whilst this is only true for Tangibles for Perceptions. Under Perceptions, it is also noted that Responsiveness and Empathy loaded on the same component. This implies that respondents identified these two dimensions constituting a single dimension. Splitting and common loadings are generally due to the interpretation of the statements by the respondents.

4.5 Dimensions and Gap score analysis

This section deals with the scoring patterns observed for Expectations and Perceptions. A Gap score was determined as the difference between Perceptions and Expectations. Negative gap scores indicate shortcomings in service delivery. To determine whether the Gaps are significant, a Wilcoxon Test was done.

The Tables and Figures below depict the scoring patterns of each statement and dimension.

4.5.1 Tangibles

Figure 4.3 illustrates the overall mean scores and gaps for the questions demonstrating tangibles

Figure 4. 3: Mean score for Tangibles

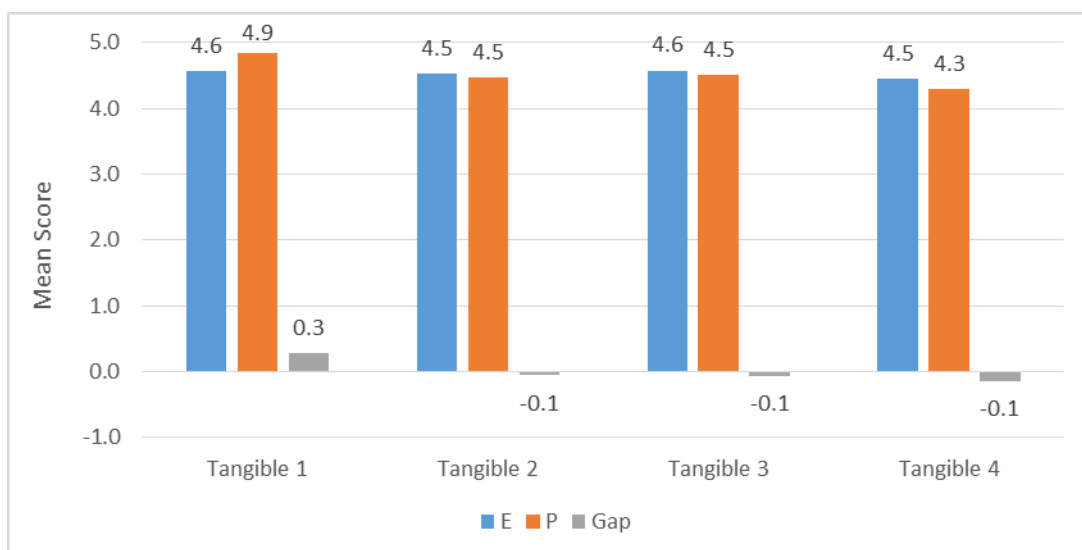


Table 4. 12: Mean score for Tangibles

Tangibles		E	P	Gap	Wilcoxon Test p-value
Excellent orthotics and prosthetics facility should have modern equipment	Tangible 1	4.6	4.9	0.3	0.733
The physical facilities at an excellent orthotics and prosthetics department should be visually appealing	Tangible 2	4.5	4.5	-0.1	0.406
Staff at medical orthotics and prosthetics should be neat in appearance	Tangible 3	4.6	4.5	-0.1	0.391
Advertising material should be visually appealing at an excellent orthotics and prosthetics department	Tangible 4	4.5	4.3	-0.1	0.080

Figure 4.3 reveals that the perceptions are lower than expectations. A positive gap score (tangible 1) implies that the facility exceeds the respondent's expectations. That is, the facility has more modern equipment that what respondents expected to find. Negative gaps imply that there are shortcomings in the offerings from the facility. To determine whether the scoring patterns per statement were significantly different between expectations and perceptions, a Wilcoxon test was done.

4.5.2 Reliability

The mean score and gaps for the questions representing reliability is shown in Figure 4.4.

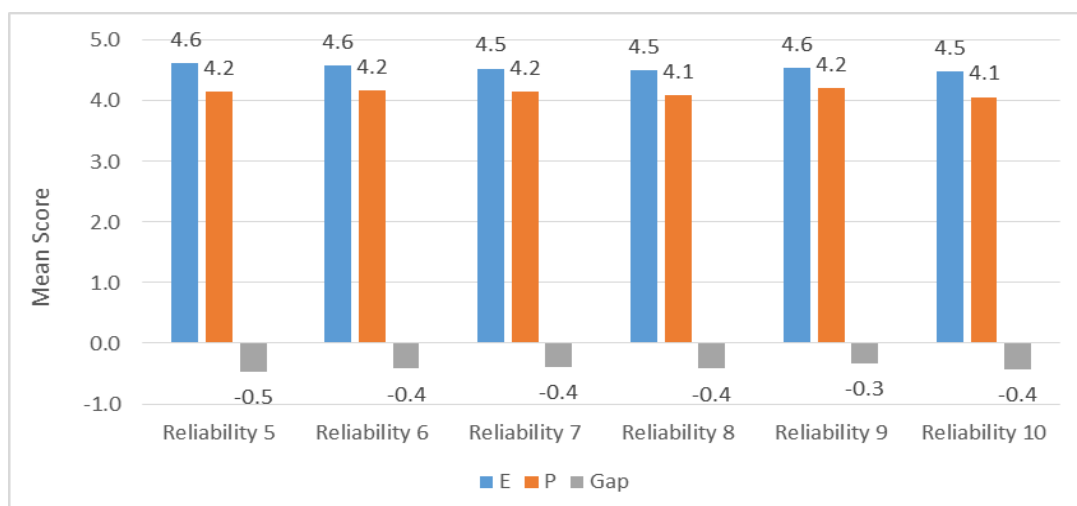
Figure 4. 4: Mean score for reliability

Table 4. 13: Mean score for reliability

Reliability		E	P	Gap	Wilcoxon Test p-value
When excellent orthotist and prosthetist promise to do something by a certain time, they should do so	Reliability 5	4.6	4.2	-0.5	0.000
When you have a problem, excellent orthotist and prosthetist should show sincere interest in solving it.	Reliability 6	4.6	4.2	-0.4	0.000
Staff at an excellent orthotics and prosthetics department should perform the service right the first time	Reliability 7	4.5	4.2	-0.4	0.000
Excellent orthotist and prosthetist should deliver its services at the times it promises to do so	Reliability 8	4.5	4.1	-0.4	0.000
The staff should inform me about when services will be performed.	Reliability 9	4.6	4.2	-0.3	0.000
Excellent orthotist and prosthetist should insist on error-free records	Reliability 10	4.5	4.1	-0.4	0.000

Figure 4.4 shows that the perceptions are lower than the expectations. A negative gap score (reliability 5) that *is an excellent orthotist and prosthetist promise to do something by a certain time, they should do so* was noted to be relatively high when compared to other statements for this dimension. The highlighted significance values (p-values) are less than 0.05 (the level of significance), this implies that the distributions were not similar. That is, the differences between expectations and perceptions were significant. The majority of respondents expected that an orthotist and prosthetist should honour their promises to deliver services on time and to show sincere interest in solving their problems. For reliability, it is noted that the gap scores are very close to zero.

4.5.3 Responsiveness

The mean score and gaps for the questions representing responsiveness are indicated in Figure 4.5.

Figure 4. 5: Mean score for responsiveness

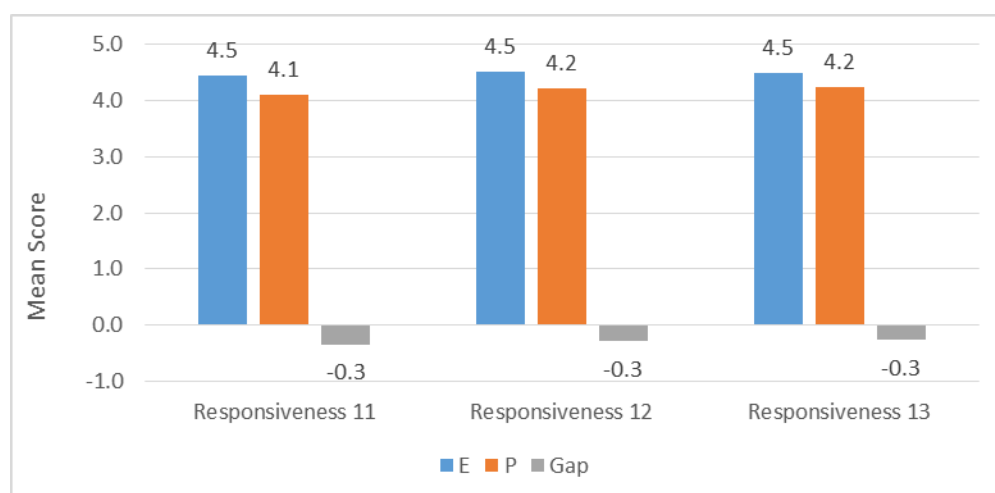


Table 4. 14: Mean score for responsiveness

Responsiveness		E	P	Gap	Wilcoxon Test p-value
Employees at an excellent orthotics and prosthetics department should give prompt service	Responsiveness 11	4.5	4.1	-0.3	0.000
Employees should always be willing to help you at an excellent orthotics and prosthetics department	Responsiveness 12	4.5	4.2	-0.3	0.001
Staff at an excellent orthotics and prosthetics department should never too busy to respond to patient requests.	Responsiveness 13	4.5	4.2	-0.3	0.002

With reference to Figure 4.5, the gaps for the statements are relatively similar. Expectations exceed perceptions. Negative gaps imply that there are shortcomings in attending the patient's requests from the department. An excellent orthotics and prosthetics facility is expected to assist patients, the majority of respondents expected prompt services, and staff to provide good service and be timeously informed when services will be performed.

4.5.4 Assurance

The mean score and gaps for the questions representing assurance are shown in Figure 4.6.

Figure 4. 6: Mean score for assurance

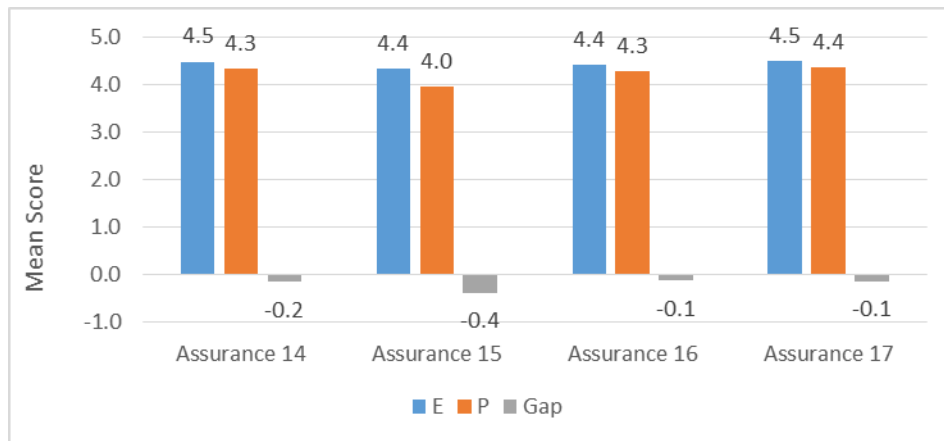


Table 4. 15: Mean score for assurance

Assurance		E	P	Gap	Wilcoxon Test p-value
The behaviour of employees should instil confidence in you.	Assurance 14	4.5	4.3	-0.2	0.038
You should feel safe in your transactions with an excellent orthotics and prosthetics department.	Assurance 15	4.4	4.0	-0.4	0.000
Employees at an excellent orthotics and prosthetics department should consistently courteous to patients.	Assurance 16	4.4	4.3	-0.1	0.079
Staff should have the professional knowledge to answer your questions.	Assurance 17	4.5	4.4	-0.1	0.042

Figure 4.6 demonstrates that the mean scores perceptions 4.3 are lower than expectations 4.5. The gap score was -0.4, this was high when compared to the responsiveness dimension. These results imply that MOP department has room for improvement in this aspect of service delivery. The assurance dimension of service quality is highly dependent on employee's ability to communicate their credibility and to inspire confidence and trust. Overall, the patients have high expectations of assurance in relations to service delivery at the MOP department.

4.5.5 Empathy

Figure 4.7 depicts the mean score and gaps for the questions representing empathy.

Figure 4. 7: Mean score for empathy

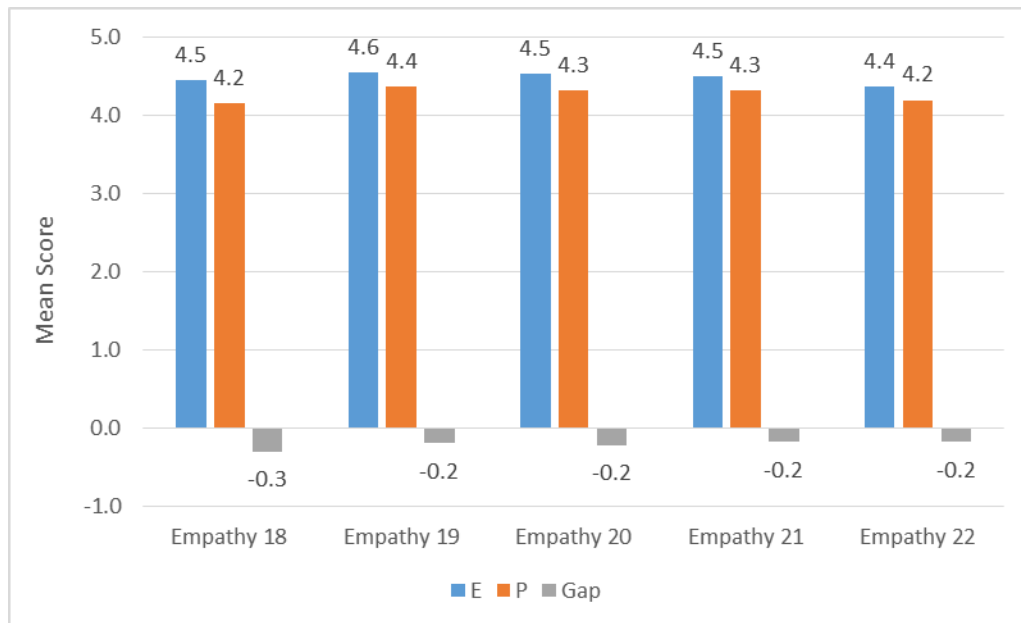


Table 4. 16: Mean score for empathy

Empathy		E	P	Gap	Wilcoxon Test p-value
Staff should give personal attention to customers.	Empathy 18	4.5	4.2	-0.3	0.000
Excellent orthotist and prosthetist should have the patient's best interest at heart.	Empathy 19	4.6	4.4	-0.2	0.011
Staff at an excellent orthotics and prosthetics department should understand the patient's specific needs.	Empathy 20	4.5	4.3	-0.2	0.002
Employees at an excellent orthotics and prosthetics department should give personal attention.	Empathy 21	4.5	4.3	-0.2	0.020
Excellent orthotist and prosthetist should have convenient business hours.	Empathy 22	4.4	4.2	-0.2	0.026

In all but the first instance, perceptions are lower than expectations. The high gap score -0.3 implies that staff should give personal attention to patients. The expectations and perceptions are almost consistent within these categories.

Although, the mean gap score is slightly the same, the attention given to patients needs to be addressed.

4.5.6 Overall dimension gap scores

Figure 4.8 illustrates the overall gap scores for dimensions.

Figure 4. 8: Overall mean score dimension

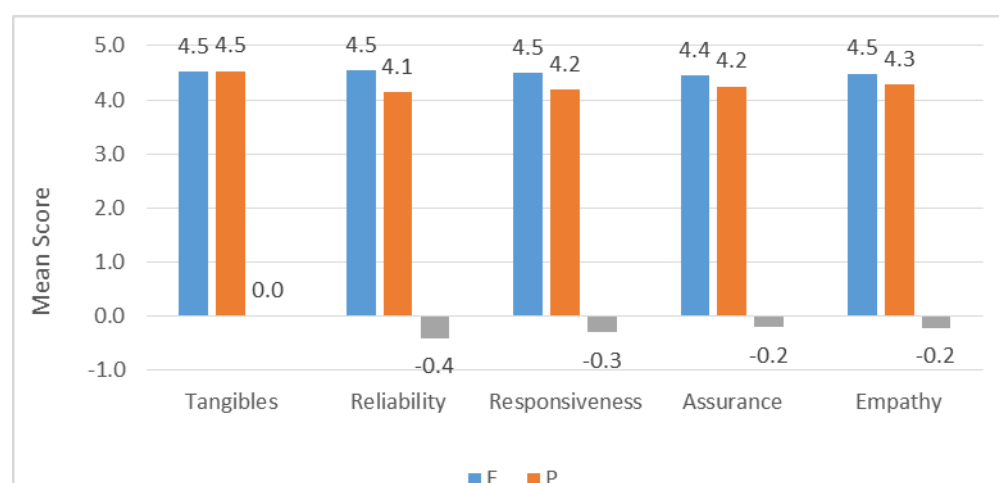


Table 4. 17: overall mean score for dimension

	E	P	Gap	Wilcoxon Test p-value
Tangibles	4.5	4.5	0.0	0.396
Reliability	4.5	4.1	-0.4	0.000
Responsiveness	4.5	4.2	-0.3	0.000
Assurance	4.4	4.2	-0.2	0.004
Empathy	4.5	4.3	-0.2	0.002

Figure 4.8 reflects a positive overall gap score for tangibles which implies that the facility exceeds the patient's expectations for MOP department. That is, the facility has modern equipment, the department is visually appealing, the staff is neat in appearance and advertising material is visually appealing, then what respondents expected to find. The negative gaps imply that there are shortcomings in the offering from the facility.

Table 4.17 shows the differences tested in order to determine whether the scoring patterns per statement were considerably different between expectations and perceptions, a Wilcoxon test was done. The null hypothesis claims that there is no

difference between the two categories in the central value. The alternate states that there is a significant difference, results are shown in the table. For tangibles, it was noted that all p-values were greater than 0.05. Hence, even the negative gaps were not significant, it is noted that the gap score very close to zero. The findings reveal that the gap is small, and, therefore, it can be concluded that patients are satisfied with the equipment, visually appealing facility, staff neat appearance and visually appealing advertising material at the MOP department.

4.6 Hypothesis Testing

The traditional approach to reporting results requires a statement of statistical significance. A p-value is generated from a test statistic. A significant result is indicated with " $p < 0.05$ ". These values are highlighted in yellow. A paired t-test is performed to determine whether the differences between the overall expected and perceived scores are significant. The null hypothesis claims that the means are the same. Table 4.18 illustrates the results for the paired t-test.

Table 4. 18: T-Test Scores

		Sig. (2- tailed)
Pair 1	Excellent orthotics and prosthetics facility should have modern equipment _E - Excellent orthotics and prosthetics facility should have modern equipment_P	0.73
Pair 2	The physical facilities at an excellent orthotics and prosthetics department should be visually appealing_E -The physical facilities at an excellent orthotics and prosthetics department should be visual appealing_P	0.41
Pair 3	Staff at medical orthotics and prosthetics should be neat in appearance_E - Staff at medical orthotics and prosthetics should be neat in appearance_P	0.39
Pair 4	Advertising material should be visually appealing at an excellent orthotics and prosthetics department_E -Advertising material should be visually appealing at an excellent orthotics and prosthetics department_P	0.08
Pair 5	When excellent orthotist and prosthetist promise to do something by a certain time, they should do so_E -When excellent orthotist and prosthetist promise to do something by a certain time, they should do so_P	0.00
Pair 6	When you have a problem, excellent orthotist and prosthetist should show sincere interest in solving it_E - When you have a problem, excellent orthotist and prosthetist should show sincere interest in solving it_P	0.00
Pair 7	Staff at an excellent orthotics and prosthetics department should perform the service right the first time_E -Staff at an excellent orthotics and prosthetics department should perform the service right the first time_P	0.00
Pair 8	Excellent orthotist and prosthetist should deliver its services at the times it promises to do so_E - Excellent orthotist and prosthetist should deliver its services at the times it promises to do so_P	0.00
Pair 9	The staff should inform me about when services will be performed _E - The staff should inform me about when services will be performed _P	0.00
Pair 10	Excellent orthotist and prosthetist should insist on error-free records _E - Excellent orthotist and prosthetist should insist on error-free records _P	0.00
pair 11	Employees at an excellent orthotics and prosthetics department should give you prompt service _E -Employees at an excellent orthotics and prosthetics department should give prompt service _P	0.00
Pair 12	Employees should always be willing to help you at an excellent orthotics and prosthetics department_E - Employees should always be willing to help you at an excellent orthotics and prosthetics department_P	0.00
Pair 13	Staff at an excellent orthotics and prosthetics department should never too busy to respond to patient requests_E - Staff at an excellent orthotics and prosthetics department should never too busy to respond to patient requests_P	0.00
Pair 14	The behaviour of employees should instill confidence in you_E -The behaviour of employees should instill confidence in you_P	0.04
pair 15	You should feel safe in your transactions with an excellent orthotics and prosthetics department_E - You should feel safe in your transactions with an excellent orthotics and prosthetics department_P	0.00
Pair 16	Employees at an excellent orthotics and prosthetics department should consistently courteous to patients_E -Employees at an excellent orthotics and prosthetics department should consistently courteous to patients_P	0.08
Pair 17	Staff should have the professional knowledge to answer your questions_E - Staff should have the professional knowledge to answer your questions_P	0.04
Pair 18	Staff should give personal attention to customers_E - Staff should give personal attention to customers_P	0.00
Pair 19	Excellent orthotist and prosthetist should have the patient's best interest at heart_E -Excellent orthotist and prosthetist should have the patient's best interest at heart_P	0.01
Pair 20	Staff at an excellent orthotics and prosthetics department should understand a patient's specific needs_E - Staff at an excellent orthotics and prosthetics department should understand a patient's specific needs_P	0.00
Pair 21	Employees at an excellent orthotics and prosthetics department should give you personal attention_E - Employees at an excellent orthotics and prosthetics department should give personal attention_P	0.02
Pair 22	Excellent orthotist and prosthetist should have convenient business hours_E -Excellent orthotist and prosthetist should have convenient business hours_P	0.03

All highlighted values indicate that the differences between the expected and perceived values are significant. This implies that the means for expectations and perceptions are not the same and the direction of the differences can be determined from the frequencies and means as analysed under dimension analysis with gap scores. Even though the differences may seem small, most are significant.

In the above T-Test results, the **p** significance is 0.00 for the pair statement 9 regarding staff informing patients of when the service will be performed. As indicated under Table 4.5, the mean score for expected values for statement 9 is 4.55 and the perceived mean score value is 4.22 for the (MOP) department.

The mean gap score for reliability is -0.47 for statement 5 and are the highest. Patients indicate less satisfaction for this statement relating to the MOP department promises to do something on a certain time. This can be attributed to the delays of receiving their devices. The department needs to re-evaluate the possibility of finishing patients' prostheses in time and ordering more components to reduce delays.

The above Table 4.18 T-test results, the **p** significance value is 0.00 for the pair 11 statement regarding staff giving prompt service to patients. As indicated under the responsiveness dimension, the mean gap score for expected values for statement 11 are 4.45, and the perceived mean score is 4.10.

The gap means the score is -0.35 for MOP department. The gap score is the highest and patients indicate less satisfaction for this statement relating to staff giving prompt service. This can be attributed to staff giving one patient attention, as they are fewer supervisors qualified in this profession. The department needs to ensure that less than three patients' appointments are scheduled for each day.

For the pair 15 statement in the above T-test results, the **p** significance value is 0.00 regarding patients feeling safe in their transaction at the MOP department. As indicated under the assurance dimension, the mean score for the expected values for statement 15 is 4.35 and the perceived mean score is 3.97.

The mean gap score is -0.38. This gap score is the highest when compared to statement 14, 16 and 17, patients indicate less satisfaction for this statement relating

to feeling safe in their transaction to the MOP department. Staff at MOP department need to ensure patients that they are in a safe place and they will be assisted.

In the orthotics and prosthetics context, the main source of assurance is with the orthotist/prosthetist, orthopaedic surgeon, occupational therapist, physiotherapist, and nurses. Their knowledge and manner of interaction with patients inspire trust and instils confidence in the organisation. This dimension is considered particularly important for services that may be perceived to be associated with high levels of risks as well as where the customer may be unable to properly evaluate the service as is often the case in health care services (Adat, 2013:79). Therefore, patients should be treated in such a way that they feel important to the organisation, and that their needs are seen as important to the organisation (Benner. 2015:245). To show empathy, service providers need to act that they understand, are aware of being sensitive to each patient's individual needs. Hence, the need to keep their promises and ensuring patients that they will be safe in their transaction to the MOP department.

4.7 CHI-SQUARE TEST

The Chi-square test was performed to determine whether there was a statistically significant relationship between the variables (rows vs columns). The null hypothesis states that there is no association between the variables. The alternate hypothesis indicates that there is an association. To test the relationships between the expected and perceived values, paired t-tests were performed and the results are presented in Table 4.19.

Table 4. 19: Chi-Square Test

	Gender	Age	Highest education level	Visits
Excellent orthotics and prosthetics facility should have modern equipment_E	0.778	0.738	0.642	0.696
The physical facilities at an excellent orthotics and prosthetics department should be visual appealing_E	0.578	0.437	0.623	0.409
Staff at medical orthotics and prosthetics should be neat in appearance_E	0.374	0.276	0.201	0.615
Advertising material should be visually appealing at an excellent orthotics and prosthetics department_E	0.883	0.695	0.529	0.571
When excellent orthotist and prosthetist promise to do something by a certain time, they should do so_E	0.193	0.209	0.034	0.774
When you have a problem, excellent orthotist and prosthetist should show sincere interest in solving it_E	0.704	0.324	0.818	1.000
Staff at an excellent orthotics and prosthetics department should perform the service right the first time_E	0.861	0.072	0.816	0.689
Excellent orthotist and prosthetist should deliver its services at the times it promises to do so_E	0.449	0.201	0.053	0.584
The staff should inform me about when services will be performed_E	0.417	0.109	0.053	0.831
Excellent orthotist and prosthetist should insist on error-free records_E	1.000	0.174	0.475	0.475
Employees at an excellent orthotics and prosthetics department should give you prompt service_E	0.420	0.008	0.354	0.546
Employees should always be willing to help you at an excellent orthotics and prosthetics department_E	0.306	0.018	0.064	0.415
Staff at an excellent orthotics and prosthetics department should never too busy to respond to patient requests_E	0.600	0.023	0.652	0.238
The behaviour of employees should instill confidence in you_E	0.210	0.048	0.001	0.623
You should feel safe in your transactions with an excellent orthotics and prosthetics department_E	0.758	0.287	0.553	0.976
Employees at an excellent orthotics and prosthetics department should consistently courteous to patients_E	0.854	0.183	0.242	0.497
Staff should have the professional knowledge to answer your questions_E	0.175	0.111	0.566	0.895
Staff should give personal attention to customers_E	0.278	0.047	0.119	0.995
Excellent orthotist and prosthetist should have the patient's best interest at heart_E	0.215	0.076	0.147	0.711
Staff at an excellent orthotics and prosthetics department should understand a patient's specific needs_E	0.905	0.264	0.285	0.928
Employees at an excellent orthotics and prosthetics department should give you personal attention_E	0.600	0.143	0.365	0.779
Excellent orthotist and prosthetist should have convenient business hours_E	0.145	0.041	0.066	0.483
Excellent orthotics and prosthetics facility should have modern equipment_P	0.036	0.000	0.000	0.761
The physical facilities at an excellent orthotics and prosthetics department should be visual appealing_P	0.113	0.029	0.002	0.410
Staff at medical orthotics and prosthetics should be neat in appearance	0.266	0.192	0.146	0.264
Advertising material should be visually appealing at an excellent orthotics and prosthetics department_P	0.236	0.009	0.132	0.303
When excellent orthotist and prosthetist promise to do something by a certain time, they should do so_P	0.139	0.157	0.056	0.524
When you have a problem, excellent orthotist and prosthetist should show sincere interest in solving it_P	0.147	0.529	0.486	0.220
Staff at an excellent orthotics and prosthetics department should perform the service right the first time_P	0.305	0.583	0.781	0.580
Excellent orthotist and prosthetist should deliver its services at the times it promises to do so_P	0.048	0.430	0.254	0.060
The staff should inform me about when services will be performed_P	0.304	0.134	0.447	0.700
Excellent orthotist and prosthetist should insist on error-free records_P	0.014	0.161	0.639	0.027
Employees at an excellent orthotics and prosthetics department should give you prompt service_P	0.094	0.243	0.009	0.256
Employees should always be willing to help you at an excellent orthotics and prosthetics department_P	0.049	0.476	0.223	0.010
Staff at an excellent orthotics and prosthetics department should never too busy to respond to patient requests_P	0.032	0.082	0.223	0.011
The behaviour of employees should instill confidence in you_P	0.067	0.743	0.224	0.273
You should feel safe in your transactions with an excellent orthotics and prosthetics department_P	0.870	0.659	0.360	0.373
Employees at an excellent orthotics and prosthetics department should consistently courteous to patients_P	0.071	0.421	0.688	0.074
Staff should have the professional knowledge to answer your questions_P	0.173	0.611	0.789	0.313
Staff should give personal attention to customers_P	0.442	0.816	0.436	0.041
Excellent orthotist and prosthetist should have the patient's best interest at heart_P	0.805	0.058	0.932	0.108
Staff at an excellent orthotics and prosthetics department should understand a patient's specific needs_P	0.637	0.717	0.965	0.218
Employees at an excellent orthotics and prosthetics department should give you personal attention_P	0.839	0.569	0.592	0.052
Excellent orthotist and prosthetist should have convenient business hours_P	0.094	0.044	0.565	0.199

Table 4.19, the p-value between “excellent orthotics and prosthetics facility should have modern equipment _P” and “Gender” is 0.036.. This implies that modern equipment do play a role in how patients perceive modern equipment.

The p-value between "The behaviour of employees should instil confidence in you_E" and "Highest education level" is 0.001. This is less than the level of significance of 0.05. It implies that the number of times respondents visit the MOP department expects staff behaviour to instil their confidence.

The p-value between "When excellent orthotist and prosthetist promise to do something by a certain time, they should do so_E" and "Highest education level" 0.034. This implies that the highest level of education of respondents does play a role in terms of how they expect the MOP department to deliver on its promises. Also, the p-value between "Excellent orthotist and prosthetist should insist on error-free records_P" and "Number of visits" is 0.027. The number of visits by the respondents does play a role in view of how they expect the department to have error-free records, as this will save time.

Table 4.19, the Chi-square results, the p-value “Staff at an excellent orthotics and prosthetics department should never be too busy to attend to patients requests_P” and “Gender” is 0.032. This suggests that respondents’ gender does play a role in terms of how they perceive staff attention to their requests.

Furthermore, the p-value between “Excellent orthotist and prosthetist should have convenient business hours_P” and “Age” is 0.044. This implies that the age of respondents does play a role in terms of their expectations of the department having convenient business hours.

From the above Chi-square results, the p-value between “Employees should always be willing to help you at an excellent orthotics and prosthetics department_P” and “Number of visits” is 0.010. This is less than the level of significance of 0.05. It implies that the number of visits does play a role in terms of how patients perceive staff to be always willing to help.

The above chi-square results highlight the significant role when it comes to certain questions; gender, age and number of visits to the department. Age and Highest educational level played a significant role with respect to the statements in the

category of reliability and responsiveness. Patients' satisfaction at MOP department is influenced by perceptions of service quality, the perception of the cost of artificial limbs, the efficiency, and knowledge of staff as well as the emotional state of the patient (Adat, 2013:83). Customer satisfaction is a highly variable assessment individual's do base on their experiences with specific features of products and services they receive, it makes sense for servicing organisations to involve customer satisfaction measurement as their meaningful benchmark for development.

4.8 Conclusion

The results reveals that the majority of respondents expect an excellent MOP department to deliver services that will exceed their expectations. This chapter presented a number of various methods of quantitative analysis applied to obtain descriptive and inferential statistics. The data analysis further indicated that the results were statistically significant and did not happen by chance. The positive gap score for tangibles implied that the facility exceeds the respondent's expectations. Results for other dimensions show that in every question, the patient's expectation exceeded the patient's perception. Furthermore, the results identified four service quality dimensions that require further attention.

The next chapter will present the overall recommendations and conclusion for this study.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter presents the summary of theoretical study, findings in relation to the service quality dimensions, empirical study, achievement of research objectives, limitations of the study, recommendations, recommendations for orthotics and prosthetics in general, scope for the future research and conclusions. Chapter four presented the analysis of data collected from the 120 questionnaires using descriptive and inferential statistics. Whilst the previous chapter discussed statistical information that resulted from the questionnaire carried out a more in-depth look into the results and findings in relation to the objectives of this study.

5.2 SUMMARY OF THEORETICAL STUDY

The aim of this study was to evaluate patients' perceptions of service quality provided at the Medical Orthotics and Prosthetics (MOP) department, at a selected university in KwaZulu-Natal and to offer management understanding into improving the efficiency and effectiveness of service quality and the opportunity to address any issues impacting the delivery of service quality at the department. This will lead to greater retention of existing patients and the acquisition of new patients being referred to the department.

Literature review gave an overview of the related orthotics and prosthetics customer service. The literature discussed the concepts of customer satisfaction, characteristics, and service quality dimensions. Findings shows that the interest in orthotics and prosthetics has grown considerably over the last decade, and there is a shortage of trained and registered MOP's in South Africa, and this led to poor service delivery and backlog as patients wait for more than a year to receive prosthetics devices. The researcher, therefore, believed that the key differentiating factor in the orthotics and prosthetics sector is customer service.

This chapter focused on the current situation in the South African orthotics and prosthetics service delivery, specifically observing the public sector. The literature highlighted that customer service is a key issue to prompt patient satisfaction and retain patients to the public sector. Customer satisfaction, as a result of customer

service in the health industry, was also identified. Service delivery was perceived as the result of customer's comparison of expectations about the services performed. Customer satisfaction at an orthotics and prosthetics department was seen as a key factor influenced by perceptions of service quality, perceptions of the cost of an artificial device, the efficiency and knowledge of staff as well as the emotional state of the patient (Hudson, 2013:48).

Furthermore, the characteristics and the SERVQUAL model was discussed. Buswell and Donne (2017:15) suggest that these characteristics make the process of service quality and delivery very compound for both customer and seller.

The intangibility is used in marketing to describe the inability to assess the value gained from engaging in an activity using any tangible evidence. Zeithaml and Bitner (2012) state that most of the service quality intangibility causes problems for marketers, for example, services cannot be patented and thus create problems for a new product. The tangible elements for the MOP department involve clinic room, equipment and advertising material used). Micah (2012:22) states that the SERVQUAL model provides basis for the product or service to measure customer satisfaction, this scale is also known as the gap model. Thompson and Baele (2011:48) state that this has been proven to be one of the best ways to measure the quality of services provided to the customer.

The literature review also discussed the gap model. The gap model conceptualizes perceived service quality as the gap which is the difference between the expectation of service quality from an excellent service provider and the perception of service quality from the current service provider (Mbewe, 2011). Lovelock and Wirtz (2010:136) argue that the management view on quality means consistently meeting or exceeding customers' expectations and perceptions, the management's task is to balance customer expectations and perceptions and close gaps. Gap five, for example, the gap between customer expectation and perception of service quality, was stressed as the most important gap to be closed in order to improve customer satisfaction. Thus should focus on gap five, the difference between patients' expectations and perceptions of service quality for the selected Medical Orthotics and Prosthetics department.

Chapter four discovered that customers' perceptions are lower than their expectations at the selected department. The negative gaps showed that the delivered services fall below patients' expectations of service quality while the positive gaps reflected that delivered services surpass patients' expectations. While the gaps are relatively small, they are significant in highlighting areas of improvement and are discussed in the findings of service quality below.

5.3 FINDINGS IN RELATION TO THE SERVICE QUALITY DIMENSIONS

The gap analysis of service quality was discussed in chapter two as one of the best received and most heuristically valuable contributions to the service literature. It identifies the key discrepancies relating to management perception of service quality and tasks associated with service delivery to patients. The dimensions are discussed below:

5.3.1 Tangibility

The tangibility for this study refers to the Medical Orthotics and Prosthetics equipment, physically appealing facilities, staff neat appearance. To close all the "tangibility", gap score of -0.15 identified in Table 4.4 as the largest was associated with advertising material. The selected department need to improve on the tangible dimension and visually display more advertising material. Staff should be aware of the importance of maintaining tangible elements such as a quality environment to ensure that patients are always attracted to its visual appeal and an enhanced well-being of the patients.

5.3 2 Reliability

Reliability is seen as being reliable and is translated into the ability of the supplier to execute the service in a safe and efficient manner (Ismail, 2016:10). The reliability means a score of this study indicated that the mean gap score of -0.47. The statement in this dimension produced the largest gap. The reliability dimension has the largest gap score and indicates that the staff needs to improve in terms of keeping their promises that is to deliver patients devices at the promised time. Staff should understand the importance of keeping promises as well as the danger of overpromising (Pillay, 2011:85).

5.3.3 Other dimensions related factors

The other dimensions include responsiveness, assurance, and empathy respectively. Among these three dimensions, responsiveness has the third largest gap of -0.35, while empathy has a gap score of -0.17 and assurance has the mean gap score of -0.14. Tangibles have the smallest gap score of -0.06 which indicates a fair degree of agreement with the statements that constitute this dimension. This finding implies that overall, there are many respondents who are satisfied with the appearance of physical facilities, equipment and staff neatness at the selected Medical Orthotics and Prosthetics department. By analysing expectations and perceptions of patients' satisfaction, it can provide a starting point for management to develop and formulate marketing strategies to meet the needs of each specific dimensions more effectively (Adat, 2013:92).

5.4 EMPIRICAL STUDY

Chapter four analysed, interpreted and presented results of the study undertaken. The study was quantitative in nature, a total of 120 questionnaires were used to extract information from patients assisted by (MOP) department, in the selected University in KwaZulu-Natal. From the results, it is noted that there are crucial aspects of service quality that (MOP) department must address in order to provide improved customer service and satisfaction.

This study was conducted following the logical stages of planning and framing; a gathering of primary and secondary data; the analysis of data from respondents and the interpretation of study results as well as report writing.

5.5 ACHIEVEMENT OF RESEARCH OBJECTIVES

Study objectives serve as the support of the entire study. The execution of the research objectives is briefly discussed below.

- **To identify patients' expectations in terms of the delivered service at MOP department**

Chapter two researched literature and provided an understanding of the essential characteristics and the five dimensions of service quality. Patients expectations of service quality in orthotics and prosthetics were identified,

tested and analysed in chapter four. The gap between patients' expectations and perceptions were measured according to patients' expectations of the delivery of the five dimensions of service quality: tangibles, reliability, responsiveness, assurance, and empathy. The results indicated that patients' expectations at the MOP department exceeded their perceptions. This finding reveals that improvements are necessary across all five dimensions. The gap poses a challenge that the management of the selected department to develop strategies to close these gaps. Therefore, the first objective has been achieved.

- **To ascertain the perceptions of patients towards the services provided at MOP department**

As indicated in the literature review, the process of service delivery is influenced by the five dimensions of service quality. Chapter two explains all five dimensions and highlighted their importance in attaining patient satisfaction. Patients' perceptions, in terms of service quality at MOP department, were tested and analysed in chapter four. The results indicated that the respondent's perceptions of the five dimensions of service quality were not what they expected. This shows that the patients are not receiving quality service delivery at MOP department in the selected university in KwaZulu-Natal. Therefore, this objective has been achieved.

- **To measure the gap between patient perceptions and expectations of service quality modified version of SERVQUAL model**

The basis of this study was to determine if a gap exists between patients' expectations of service quality and the actual service delivered at MOP department. In chapter four, a statistical analysis showed the calculation and measurements of the data collected from respondents. Forty-four items were measured using the SERVQUAL instrument, in measuring the gap between patients' expectations and perceptions. In the latter part of chapter five, the recommendations on how to improve service delivery are presented, and, therefore, this objective has also been achieved.

5.6 LIMITATIONS OF THE STUDY

The study was conducted at the Medical Orthotics and Prosthetics department (MOP) within a selected University in KwaZulu-Natal. As such, the study only contain information from the selected department. Thus the results cannot be generalised to other Orthotics and Prosthetics departments; the results of this study may not be representative of the entire population since convenience sampling was used.

There are no substantial amount of data on service quality in orthotics and prosthetics in the South African context, but there is an adequate amount of information about service quality around the world.

5.7 RECOMMENDATIONS

- It is crucial to entrench the concept of reliability in the interest if patients satisfaction and offering superior service. This may be translated into adhering to deadlines, solving problems immediately and being faultless. The MOP department can also focus on handling complaints in a professional manner with the patients' best interest at heart. Procedures in dealing with customer complaints should reflect the patient-centric approach;
- Findings show that the MOP department is neat and visually appealing. However, with regards to visually appealing advertising material, the MOP should purchase and display more advanced material to ensure that patients adapt quickly to the environment. Therefore, it is recommended that some effort is made by the MOP department to ensure that they improve their advertising material as this helps to develop a unique department identity and branding.
- The employees at the selected MOP department should embrace the concept of empathy in their interaction with patients. The MOP department employees, for example, need to show patients that they are interested and care about patients' health and well-being, in this case, patients receiving their mobility devices in time.
- From the results, patients are not satisfied with the staff willing to serve them promptly, offer assistance and deal with patients' requests. Therefore, it is important that the MOP department address procedures are taken to respond to patients requests.

- The finding indicates that patients are not satisfied with their transaction to the MOP department. Therefore, it is recommended that employees at the MOP department are trained to ensure patients safety and also ensure patients that they will be safe in their transaction to the department. Patients will be provided with assurance that they are safe at their transaction to the department.
- It is important to promote the right mind set for delivering the right customer service. Staff must be trained to be patient-centred rather than merely task driven. This can be accomplished by training staff in service quality programmes example customer service, patient care, rehabilitation, communication workshops, and interpersonal skills workshops;
- Management should encourage patient feedback and respond to identified problem promptly;
- Management should clarify tasks of all personnel and find solutions, where necessary and deal with tasks without interfering with quality performance; and
- Each employee should have knowledge; resources and skills to provide the right customer service. Competent and skilled staff are vital in order to provide superior customer service.

5.8 RECOMMENDATIONS FOR ORTHOTICS AND PROSTHETICS IN GENERAL

- Orthotists and Prosthetists should encourage patients to provide feedback on their services. Problems should be seen as opportunities and this way of thinking should also be understood by staff;
- The specialists should at least allocate substantial time for each patient and encourage social interaction between patients and staff. Management and staff can contribute immensely to the improvement of service quality dimensions;
- The Medical Orthotics and Prosthetics department (MOP) should remember that patients visit their department for well-being, in this case, to be able to receive mobility devices. The department should introduce other medical services such as physiotherapists, counsellors, and patient support groups to better assist the patients to improve their quality of life.

- Medical Orthotics and Prosthetics department (MOP) should make an effort to the patients and show them how dedicated there are to making sure that they feel good about being part of the organisation; and
- The department needs to develop processes for continual evaluation of expectations and perceptions of service delivery by patients. This development could indicate the extent to which the department needs to improve on certain dimensions to satisfy patients in terms of service quality and delivery. Management and staff need to understand that patients' feedback, complaints, and questions provide critical information needed to anticipate areas of potential dissatisfaction.

5.9 SCOPE FOR THE FUTURE RESEARCH

In this study, respondents were selected from the backlog of patients waiting to receive artificial devices from the KwaZulu-Natal province. It will be beneficial to extend the study to other orthopaedic centres nationally, in order to assess the impact of service quality and delivery of these respondents in further studies. The opinions of patients from other centres will enable the researcher to compare and contrast the results between geographic regions.

Convenience sampling was used in this study. It would be advisable to use the stratified sampling technique in future studies. Alvi (2016:20) suggests that stratified sampling is the probability sample that is forced to be more representative through a simple random sampling of mutually exclusive and exhaustive subsets stratified samplers are statistically more efficient because one source of variation has been eliminated. This technique will also allow the researcher to compare results across different provinces.

It is recommended that further research is conducted to include all orthopaedic centres of all (MOP) departments, to explore, in depth, more about service quality and delivery and its impact on patients who require mobility devices. It was noted that some patients needed to elaborate more about service delivery they receive but the questionnaire was not designed to allow for further recording of information. It is also suggested that this should be done annually so that it will allow management to draw yearly comparisons and determine how service improvements have affected patients' expectations and perceptions of customer service over time.

5.10 CONCLUSION

This study highlighted the expectations and perceptions of patients at Medical Orthotics and Prosthetics department in a selected university in KwaZulu-Natal. Issues relating to the delivery of service quality and the gap scores were discussed. The importance of service delivery is crucial in the Medical Orthotics and Prosthetics department.

The recommendations discussed in this chapter represent some of the measures that could possibly be taken by the management of the selected (MOP) department to improve the delivery of service quality. The importance of customer satisfaction, therefore, is of vital importance. This study will have a positive impact on the delivery of service quality, which will assist (MOP) department management to increase patient satisfaction.

REFERENCES

- Abosag, I., Ramadan, Z.B., Baker, T. and Jin, Z. 2019. Customers' need for uniqueness theory versus brand congruence theory: The impact on satisfaction with social network sites. *Journal of Business Research*. 1-11.
- Adat, N. 2013. Customer satisfaction at the selected retail pharmacy chain in the greater Durban area.
- Afthinos, Y. Theodorakis, N.D and Nassis, P. 2005. Customer expectations of service quality in Greek fitness centres. *Managing Service Quality*. 15 (3): 245-258. Available: <https://marketing.conferencessrvices.net/>. (Accessed 18 May 2015).
- Agbor, J.M. 2011. The Relationship between Customer Satisfaction and Service Quality: a study of three Service sectors in Umeå. MSc. Umeå University.
- Alexander, J. and Hill, N. 2006. *Customer satisfaction and loyalty measurement*. 3rd ed. England: Gower publishing limited.
- Allison, S.G. Arik, C. and Moran, C.M. 2015. Enhancing emotional performance and service through human resources practices: A system perspective. *Human Resource Management Review*. 26 (1): 14-24. Available: <https://doi.org/10.1016/j.hrmr.2015.09>.
- Anderson, E.W., Fornell, C., and Lehmann, D.R. 1994. Customer satisfaction, market share and profitability: *Journal of Marketing*, 58 (3): 53-66. Available: <https://web.itu.edu.tr/>. (Accessed 30 January 2018).
- Anjum, B. and Perros, H. 2015. Bandwidth allocation for video under quality of service constraints (Focus: Networks and Telecommunications) 1st ed. London: John Wiley and Sons Inc.
- Bennett. R and Barkensio A. 2005 Relationship quality, relationship marketing, and client perceptions of the levels of service quality of charitable organisations, *International Journal of Service Industry Management*, 16 (1) 81-106.
- Berry, L.L. and Parasuraman, A. 1992. Marketing Services: Competing through Quality. *Journal of marketing*: New York: American Marketing Association. Available: <https://www.jstor.org/stable/1252050>. (Accessed 25 April 2017).

Behzian, H. and Baghishani, M. 2014. *Criteria and measures of customer satisfaction*. United States: Lap Lambert Academic Publishing.

Bitner, M., Wilson, A. and Zeithaml V. 2016. *Services marketing: Integrating customer focus across the firm*. 3rd ed. London: McGraw Hill Higher Education.

Blose, J.E. and Tankersley, W.B. 2004. Linking dimensions of service quality to original outcomes. *Managing service quality*, 14 (1): 75-89.

Bodet, G. 2006. Investigating customer satisfaction in health club context by an application of the tetraclasse model. *European Sport Management Quarterly*. 6 (2): 149-165.

Bowen, J. 2005. Managing a Research Career, *International Journal of Contemporary Hospitality Management*, 17 (7): 633-637.

Buswell, J. and Williams, C. 2017. *Service quality in leisure, events, tourism and sport*. 2nd ed. CABI publishers.

Brady, M.K., Cronin J.J., Voorhees, C.M. and Bourdeau, B.L. 2006. The good guys don't always win: The effect of valence on service perceptions and consequences. *Journal of Services Marketing*. 20 (2):83-91.

Bryman, A. and Bell, E. 2011. *Business research method*. 3rd ed. New York: Oxford University Press.

Creswell, J.W. 2008. *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. 3rd ed. Upper Saddle River, New Jersey: Pearson Education, Inc.

Chandra, S. and Rao, A. 2013. *Customer satisfaction measurement*. India: Sage Publications.

Cudney, E.A., Furtere, S. and Dietrich, D.M. 2013. *Lean systems: Applications and case studies in manufacturing, service, and healthcare*. 1st ed. New York: Taylor and Francis group.

Coppard, B.M and Lohman, L.H. 2014. *Introduction to Orthotics: A Clinical Reasoning and Problem Solving Approach*. 4th ed. Missouri: Elsevier Mosby.

Dale, B.G. 2013. *Managing quality*. 5th ed. New York: Wiley.

Debasish, S.S. and Dey, S. 2015. Customer Perceptions of Service Quality towards Luxury Hotels in Odisha Using Servqual Model. *International Journal of Research in Business Studies and Management*, 2 (9):1-9.

Dijulius, J. 2015. The difference between a mission, purpose, and customer service vision statement. Available: <https://blog.thedijuliusgroup.com/>. (Accessed 28 October 2015).

Dhurup, M., Singh, P. and Surujlala, J. 2006 Customer service quality at commercial health and fitness centres. *South African Journal for Research in Sport*, 28 (2): 42-55.

Edgett, S. and Parkinson, S. 1993. Marketing for Service Industries - A Review. *Service Industries Journal*, 13(3): 19-39.

Eliason, F. 2012. *How to attract new customers, increase sales, and grow your business using simple customer service techniques*. Wiley.

Errol Allen Consulting (online). 2015. Available: <https://errolallenconsulting.com> (Accessed 30 November 2015).

Evenson, B. 2012. *Immobility*. New York: Tom Doherty Associates.

Frei, F. and Morriss, A. 2012. *Uncommon Service: How to win by putting your customers at the core of your business*. United States: Library of Congress Cataloging.

Fitzsimmons, J.A. 2013. *Service Management: Operations, Strategy, Information Technology*. 8th ed. New York: McGraw Hill/Irwin.

Fisk, R. 2010. Customers behaving badly: a state of the art review, research agenda and implications for practitioners. *Journal of Services marketing*, 24(6): 417-429.

Furtado, S., Briggs, T., Fulton, J., Russell, L., Grimer, R., Wren, V., Cool, P., Grant, K. and Gerrand, C. 2017. Patient experience after lower extremity amputation for sarcoma in England: a national survey. *Disability and rehabilitation*, 39(12): 1171-1190.

Gallagher, P. and Desmond, D. 2007. Measuring quality of life in prosthetic practice: Benefits and challenges. Available: <http://journals.sagepub.com/>. (Accessed 25 May 2018).

Garvin, D. A. 2010. Quality on the Line. *Harvard Business Review*, 65-73.

Gawne, L. 2013. Report on the relationship between Yolmo and Kagate. *Himalayan Linguistic*, 12(2): 1-27.

Gilbert, R. and Veloutsou, C. 2006. A cross-industry comparison of customer satisfaction. *Journal of services marketing*. 20(5): 298-308

Goodman, J.H. 2009. Women's attitudes, preferences, and perceived barriers to treatment for perinatal depression. *Birth*, 36(1): 60-69.

Guinane, C. and Davis, N. 2011. *Improving quality in outpatient services*. 1st ed. USA: Taylor and Francis Group.

Gronroos, C. and Ravald, A. 2011. Service as business logic: Implications for value creation and marketing. *Journal of service marketing*. 22(1): 5-22.

Gronroos, C. 2011. Value co-creation in service logic: A critical analysis. *Marketing Theory*, 11(3): 279-301.

Goetsch, D.L. and Davis, S. 2015. *Quality management for organisational excellence: Introduction to total quality*. 8th ed. Pearson Education Limited.

Hernon, P. and Altman, E. 2015. *Assessing service quality: Satisfying expectations of library customers*. 3rd ed. London: Facet Publishing.

Hill, N. and Allen, R. 2007. Customer Satisfaction: The customer experience through the customer's eyes: Available: <https://www.tlfresearch.com/downloads>. (Accessed 05 April 2017).

Hill, N. and Alexander, J., 2017. *The handbook of customer satisfaction and loyalty measurement*. Routledge.

Harris, E. K. 2003. *Customer service a practical approach*. Chicago: Pearson Education, Inc.

Hudson, S, 2013, *Customer service for hospitality and tourism*, Good fellow Publishers.

Hyken, S. 2011. *The amazement revolution: Seven customer service strategies to create an amazing customer and employee experience*. Austin: Texas. Greenleaf book group press.

Ismail, A. and Yunan, Y.M. 2016. Service quality as a predictor of customer satisfaction and customer loyalty. *LogForum*, 12(7): 269-283.

Jain, R. and Sinha, G. 2010. Service quality in higher education: *An exploratory study*. 4(3): 144-154.

Jobber, D. 2012. *Principles of practice of marketing*. 7th ed. United Kingdom: McGraw Hill Higher Education.

Keh, H.T. and Pang, J. 2010. Customer reactions to service separation. *Journal of Marketing*. 74(2): 55-70.

Kersten, J.F. and Koch, P. 2016. Use of moulded hearing protectors by child care workers – an interventional pilot study. *Journal of Occupational Medicine and Toxicology*, 11(1): 50-55.

Kothari, R.P. and Garg, S. 2012. Prevalence of hypertension in an urban and rural area of Jaipur District. *International Journal of Healthcare & Biomedical Research*. 1 (3):120-126. .

Kumar, R.2014. *Research Methodology: A Step-by-Step Guide for Beginners*. 4th ed. Thousand Oaks, California: Sage Publications.

Lucas, R.W., 2012, *Customer service: Skills for success*. New York: McGraw-Hill.

Lee, H., Lee, Y. and Yoo, D. 2000. The determinants of perceived service quality and its relationship with satisfaction. *Journal of Service Marketing*, 14 (2):217-231.

- Leedy, P. D. and Ormrod, J. E. 2016. *Practical research: Planning and design*. 11th ed. Pearson Education Limited. United Kingdom.
- Liden, S.B. 2003. Service quality perceptions and patient satisfaction: a study of hospitals in developing country, *Managing Service Quality*, 13, 338-348.
- Lusardi, M., Jorge, M. and Neilsen, C.C. 2012. *Orthotics and Prosthetics in Rehabilitation*. 3rd ed. United States of America: Elsevier Saunders.
- Lovelock, C. and Gummesson, E. 2004. Wither Services Marketing: In search of a new paradigm and fresh perspectives. *Journal of Service Research*, 7(1): 20-41.
- Lovelock, C. and Wirtz, J. 2010. *Services Marketing: People, Technology, Strategy* 7th ed. Prentice Hall.
- Machado, R. and Diggins, C. 2012. *Customer service*. Cape Town: Juta publishers.
- Magnusson, L. 2014. Prosthetics and Orthotic services in developing countries. Jonkoping University. Available: <https://portal.research.lu.se/portal/en/publication/>. (Accessed 25 May 2018).
- Malhotra, A. Gold, A., and Segars, A. 2001. Knowledge Management: An Organizational Capabilities Perspective. *Journal of Management Information Systems*, 18 (1): 185-214.
- McTighe, J. and Tomlison, C. 2006. *Integrating differentiated instruction and understanding by design*. 1st ed. USA: Alexandria. Library of Congress Cataloging in Publication Data.
- Micah, S. 2012. Raising the bar in patient service: Five principles of service excellence. Available: <https://www.micahsolomon.com/pdf/raising.pdf>.
- Martin, K. and Osterling M. 2013. *How to visualise work and align leadership for organisational transformation*. New York: McGraw Hill.
- Mohd Noor, M.N. and Jayashree, S. 2012. Customer satisfaction in the Malaysian timber industry. LAP Lambert Academic publishing.

Nargundkar R. 2010. '*Services Marketing, Text and Cases*', 2nd ed. Tata McGraw Hills Education Private Limited, New Delhi

Nickels, W.G. and McHugh, J.M. 2011. *Understanding business*. 11th ed. New York: McGraw Hill Education.

O'Neill, J. 2014. *Twelve thousand hours: education and poverty in Aotearoa New Zealand*. New Zealand: Dunmore publishing.

Parasuraman A, Zeithaml V, Berry L.L. 1985, "SERVQUAL, A multiple item scale for measuring Perceptions of Service Quality", *Journal of Retailing*, 64 (1): 12-40.

Parasuraman A, Zeithaml V and Berry L.L 1988, SERVQUAL: A Multi-Item Scale for Measuring Consumer Perceptions of Quality, *Journal of Retailing*, 12-38.

Peprah, A.U. and Atarah, B.A. 2014. Assessing Patient's Satisfaction Using SERVQUAL Model: A Case of Sunyani Regional Hospital, Ghana. *Journal of Business and Social Research*, 4(2), pp. 133-134.

Peppers, D. and Rogers, M. 2011. *Managing customer relationships: A strategic framework*. 2nd ed. Wiley.

Pillay, M. 2011. Student's expectations and perceptions of the sport offering at the Durban University of Technology. (Accessed 05 April 2017).

Prakash, A. and Mohanty, R.P. 2013. Understanding service quality. 24(12):1051-1052.

Ravichandran, K., Tamil-Mani, B. and Arun-Kumar, S. 2010. Influence of service quality on customer satisfaction application of SERVQUAL model. *International Journal of Business and Management*, 5(4): 117-124.

Rita, S. and Ganesan, V. 2012. *Quality enhancements in prime services sectors. Germany*: Lap Lambert Academic.

Robert, L.W. 2012. *Customer service: Skills for success*. 5th ed. New York: McGraw-Hill.

Saravan, R. and Rao, R.S.P. 2007. The impact of total quality service age on quality and operational performance: An empirical study. *The TQM Magazine*, 19 (3): 197.205

Sheilds, P.M. and Rangarajan, N. 2013. A playbook for research methods: Integrating conceptual frameworks and project management. SBN 10:1-58107-247-3

Suskie, L. 2015. *Five dimensions of service quality: A common sense guide to accreditation and accountability*. 1st ed. Francisco: Jossey-Bass.

Smith, S.A. 2012. Nurse Competence: A concept analysis. *International Journal of Nursing Knowledge*, 23 (3): 172-175.

Somerville, M., Kumaran, K. and Anderson, R., 2016. *Public health and epidemiology at a glance*. New York: John Wiley & Sons

Strydom, J., Jooste, C. and Cant, M. 2010. *Marketing management*. Cape Town: Juta and Company.

Sultz, H.A. and Young, K.M. 2013. *Healthcare USA: Understanding its organisation and delivery*. 8th ed. New York: Jones and Bartlett Learning.

Tuck, E. and McKenzie, M. 2015. *Place in Research: Theory, Methodology and Methods*. New York: Taylor and Francis group.

Wiggins, G. and McTighe, J. 2011. *The understanding by design guide to creating high-quality units*. 1st ed. USA: Alexandria. Library of Congress Cataloging in Publication Data.

Wirtz, J. and Lovelock, C. 2016. *Services Marketing: People, Technology, Strategy*, 8th ed., World Scientific. ISBN 9781944659004.

Yeo, R.K. 2008. Servicing service quality in higher education: Quest for excellence. *On the Horizon*, 16(3): 152.161.

Zeithaml, V.A 2006. *Service Marketing-Integrating Customer Focus Across the Firm*. 4th. London: McGraw-Hill/Irwin.

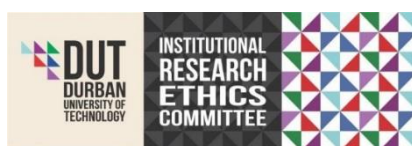
Zeithaml, V.A., Bitner, M.J. and Gremler, D.D. 2010. *Technology's impact on the gaps model of service quality*. Wiley International Encyclopedia of Marketing Available: <https://doi.org/10.1002/9781444316568.wiem1055>. (Accessed 03 March 2015).

Zeithaml, V. 2010. *Services marketing strategy*. Wiley International Encyclopedia of Marketing. Available: <https://onlinelibrary.wiley.com>. (Accessed 03 March 2015).

Zeithaml, V.A. and Bitner, M. 2012. *Services Marketing: Integrating customer focus across the firm*. 6th ed. McGraw Hill Education.

Zeithaml, V.A., Bitner, M. and Gremler, D.D. 2013. *Services Marketing: Integrating customer focus across the firm*. 6th ed. New York: McGraw Hill Education.

ANNEXURE 1: LETTER OF INFORMATION AND QUESTIONNAIRE



Dear Valued Patient

Title of the Research Study: Patients Perception of Service Quality in Medical Orthotics and Prosthetics Department at a selected University of Technology.

Principal Investigator/s/Researcher: Miss Nosipho Thabethe

Co-investigator/s/supervisor/s/: Prof S. Penciliah (B Paed, B Com Hons, M Com, PhD)

Brief Introduction and Purpose of the Study: I am currently conducting a study as part of my Masters degree in Marketing at the Durban University of Technology. The research aims to evaluate patient's perceptions at a selected Orthotics and Prosthetics department at a selected University of Technology in Durban area. Permission to conduct this survey has been obtained from the Medical Orthotics and Prosthetics department.

Outline of the Procedures: I would appreciate your co-operation in taking time to complete this short 20 minutes questionnaire as honestly as possible. The questionnaire is made up of closed-ended questions evaluating patient's satisfaction at this selected department. Research questions are simply structured making them easy to understand. 120 patients who have previously visited and assisted by the Medical Orthotics and Prosthetics department will be surveyed. Your participation is completely voluntary as a patient of this department and responses will remain anonymous.

Risks or Discomfort to the Participant: No foreseeable risks as a voluntary participant.

Benefits: This study will assist management of the selected department to ensure patient satisfaction. Furthermore, it will be published in an accredited journal and presented at a national or an international conference.

Reason/s why the Participant may be Withdrawn from the Study: There will be no adverse consequences should you choose to withdraw as a participant.

Remuneration: None

Costs of the Study: Nil costs for the participant.

Confidentiality: Completed questionnaires will be in a sealed envelope only opened by the researcher. Furthermore, consent forms will be collected by the researcher on a separate day and thus not be linked to the questionnaires.

Research-related injury: Not applicable to this study.

Persons to Contact in the Event of Any Problems or Queries:

Please contact the researcher, **Miss NN Thabethe** (078-070-1960), my supervisor **Prof S. Penciliah** (031-373-5391/pencilid@dut.ac.za) or the Institutional Research Ethics Administrator on (031-373-2900). Complaints can be reported to the Director: Research and Postgraduate Support, (031-373-2577).

ANNEXURE 2: PERMISSION LETTER

Date: 01 September 2015

Mr D Askew
Head of Department
Medical Orthotics and Prosthetics
Durban University of Technology
No 1 Boston Road Wentworth Hospital
Durban
4026

**REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN MEDICAL ORTHOTICS AND PROSTHETICS
DEPARTMENT**

Dear Mr Askew

I am a registered MTech student in the Department of Marketing and Retail Management at the Durban University of Technology. My supervisor is Professor D Penceliah.

The proposed topic of my research is, Patients Perception of Service Quality in Medical Orthotics and Prosthetics Department at a selected University. The objectives of the study are:

- a) To identify patient's expectations in terms of the delivered services provided at Medical Orthotics and Prosthetics department;
- b) To ascertain the perceptions of patient's towards the services provided at the Medical Orthotics and Prosthetics department;
- c) To measure the gap between patient's perceptions and expectations of service quality, using a modified version of the SERVQUAL model;
- d) To calculate and measure the score of the SERVQUAL dimensions

I am hereby seeking your consent to approach patients who have received service at Medical Orthotics and Prosthetics department in KwaZulu – Natal. To assist you in reaching a decision, I have attached to this letter:

- a) Copy of research proposal

Should you require any further information, please do not hesitate to contact me or my supervisor. Our contact details are as follows: penceliad@dut.ac.za / 031 373 5391 or nosiphot@dut.ac.za 031 373 6723

Upon completion of the study, I undertake to provide you with a bound copy of the dissertation.

Your permission to conduct this study will be greatly appreciated.

Yours sincerely,

Nosipho Mabethe

ANNEXURE 3: CONFIRMATION LETTER TO CONDUCT STUDY



03 September 2015

Flat Number 16
John Ross House
Victoria Embarkment
Durban
4001

Dear Miss N Thabethe,

“Patients Perception of Service Quality in Medical Orthotics and Prosthetics Department at a selected University”

I have reviewed your request to conduct research for the above project. I am pleased to inform you that we are happy to grant permission for the distribution of questionnaires to all our patients.

I look forward to seeing the findings from your research.

If anyone connected with this research have any queries please do not hesitate to contact me, **031 373 6992** or email damiena@dut.ac.za

Yours sincerely

**Head of Department
Medical Orthotics and Prosthetics**

ANNEXURE 4: QUESTIONNAIRE

Kindly rate the service you EXPECT and PERCIVE for each statement. The rating guide is as follows

No	RATINGS
1	STRONGLY DISAGREE
2	DISAGREE
3	UNCERTAIN
4	AGREE
5	STRONGLY AGREE

SECTION A: CUSTOMER EXPECTATIONS AND PERCEPTIONS

EXPECTATIONS STATEMENTS		RATINGS				
		1	2	3	4	5
1	The physical facilities at medical orthotics and prosthetics department are visually appealing					
2	Staff at medical orthotics and prosthetics are neat in appearance					
3	The behaviour of employees instils confidence in you					
4	Medical orthotics and prosthetics have the customers best interest at heart					
5	Staff give personal attention to customers					
6	Staff at medical orthotics and prosthetics department give you personal attention.					
7	Medical orthotics and prosthetics department have convenient business hours					
8	Staff at medical orthotics and prosthetics understand customers specific needs					
9	The staff inform me about when services will be performed					
10	When medical orthotics and prosthetics department promises to do something by certain time they do so.					
11	When you have a problem, medical orthotics and prosthetics department show sincere interest in solving it					
12	Staff at medical orthotics and prosthetics department give prompt service					
13	Staff have professional knowledge to answer your questions					
14	Medical orthotics and prosthetics department have modern looking equipment					
15	Advertising material is visually appealing at the medical orthotics and prosthetics department					
16	Staff at medical orthotics and prosthetics department are consistently courteous to customers					
17	Employees are always willing to help you at medical orthotics and prosthetics department					

SECTION A: CUSTOMER EXPECTATIONS AND PERCEPTIONS

PERCEPTION STATEMENTS		RATINGS				
		1	2	3	4	5
1	The physical facilities at medical orthotics and prosthetics department should be visually appealing					
2	Staff at medical orthotics and prosthetics should be neat in appearance					
3	The behaviour of employees instils confidence in you					
4	Medical orthotics and prosthetics department should have the customers best interest at heart					
5	Staff should give personal attention to customers					
6	Staff at medical orthotics and prosthetics department should give you personal attention.					
7	Medical orthotics and prosthetics department should have convenient business hours					
8	Staff at medical orthotics and prosthetics should understand customers specific needs					
9	The staff should inform me about when services will be performed					
10	When medical orthotics and prosthetics department promises to do something by certain time they should do so.					
11	When you have a problem, medical orthotics and prosthetics department should show sincere interest in solving it					
12	Staff at medical orthotics and prosthetics department should give prompt service					
13	Staff should have professional knowledge to answer your questions					
14	Medical orthotics and prosthetics department have modern looking equipment					
15	Advertising material should be visually appealing at the medical orthotics and prosthetics department					
16	Staff at medical orthotics and prosthetics department should consistently be courteous to customers					
17	Employees should always willing to help you at medical orthotics and prosthetics department					

SECTION B: GENERAL DEMOGRAPHIC INFORMATION

Please **tick only ONE box** for each question.

1. Please indicate your gender

MALE	FEMALE
-------------	---------------

2. Please indicate your age (in years)

18-25	26-35	36-45	46-55	56 and over
-------	-------	-------	-------	-------------

3. Please indicate your highest educational level

Less than matric	Matric	Degree	Post-grad	Other (specify)
------------------	--------	--------	-----------	-----------------

4. How often do you visit Medical Orthotics and Prosthetics in a month?

Once	Twice	Thrice and more
------	-------	-----------------

ANNEXURE 5: Chi-Square Test

	Gender	Age	Highest education level	Visits
Excellent orthotics and prosthetics facility should have modern equipment_E	0.778	0.738	0.642	0.696
The physical facilities at an excellent orthotics and prosthetics department should be visually appealing_E	0.578	0.437	0.623	0.409
Staff at medical orthotics and prosthetics should be neat in appearance_E	0.374	0.276	0.201	0.615
Advertising material should be visually appealing at an excellent orthotics and prosthetics department_E	0.883	0.695	0.529	0.571
When excellent orthotist and prosthetist promise to do something by certain time, they should do so_E	0.193	0.209	0.034	0.774
When you have a problem, excellent orthotist and prosthetist should show sincere interest in solving it_E	0.704	0.324	0.818	1.000
Staff at an excellent orthotics and prosthetics department should perform the service right the first time_E	0.861	0.072	0.816	0.689
Excellent orthotist and prosthetist should deliver its services at the times it promises to do so_E	0.449	0.201	0.053	0.584
The staff should inform me about when services will be performed_E	0.417	0.109	0.053	0.831
Excellent orthotist and prosthetist should insist on error free records_E	1.000	0.174	0.475	0.475
Employees at an excellent orthotics and prosthetics department should give you prompt service_E	0.420	0.008	0.354	0.546
Employees should always be willing to help you at an excellent orthotics and prosthetics department_E	0.306	0.018	0.064	0.415
Staff at an excellent orthotics and prosthetics department should never too busy to respond to patient requests_E	0.600	0.023	0.652	0.238
The behaviour of employees should instil confidence in you_E	0.210	0.048	0.001	0.623
You should feel safe in your transactions with an excellent orthotics and prosthetics department_E	0.758	0.287	0.553	0.976
Employees at an excellent orthotics and prosthetics department should consistently courteous to patients_E	0.854	0.183	0.242	0.497
Staff should have the professional knowledge to answer your questions_E	0.175	0.111	0.566	0.895
Staff should give personal attention to customers_E	0.278	0.047	0.119	0.995
Excellent orthotist and prosthetist should have the patient's best interest at heart_E	0.215	0.076	0.147	0.711
Staff at an excellent orthotics and prosthetics department should understand patient's specific needs_E	0.905	0.264	0.285	0.928
Employees at an excellent orthotics and prosthetics department should give you personal attention_E	0.600	0.143	0.365	0.779
Excellent orthotist and prosthetist should have convenient business hours_E	0.145	0.041	0.066	0.483
Excellent orthotics and prosthetics facility should have modern equipment_P	0.036	0.000	0.000	0.761
The physical facilities at an excellent orthotics and prosthetics department should be visually appealing_P	0.113	0.029	0.002	0.410
Staff at medical orthotics and prosthetics should be neat in appearance	0.266	0.192	0.146	0.264
Advertising material should be visually appealing at an excellent orthotics and prosthetics department_P	0.236	0.009	0.132	0.303
When excellent orthotist and prosthetist promise to do something by certain time, they should do so_P	0.139	0.157	0.056	0.524
When you have a problem, excellent orthotist and prosthetist should show sincere interest in solving it_P	0.147	0.529	0.486	0.220
Staff at an excellent orthotics and prosthetics department should perform the service right the first time_P	0.305	0.583	0.781	0.580
Excellent orthotist and prosthetist should deliver its services at the times it promises to do so_P	0.048	0.430	0.254	0.060
The staff should inform me about when services will be performed_P	0.304	0.134	0.447	0.700
Excellent orthotist and prosthetist should insist on error free records_P	0.014	0.161	0.639	0.027
Employees at an excellent orthotics and prosthetics department should give you prompt service_P	0.094	0.243	0.009	0.256
Employees should always be willing to help you at an excellent orthotics and prosthetics department_P	0.049	0.476	0.223	0.010
Staff at an excellent orthotics and prosthetics department should never too busy to respond to patient requests_P	0.032	0.082	0.223	0.011
The behaviour of employees should instil confidence in you_P	0.067	0.743	0.224	0.273
You should feel safe in your transactions with an excellent orthotics and prosthetics department_P	0.870	0.659	0.360	0.373
Employees at an excellent orthotics and prosthetics department should consistently courteous to patients_P	0.071	0.421	0.688	0.074
Staff should have the professional knowledge to answer your questions_P	0.173	0.611	0.789	0.313
Staff should give personal attention to customers_P	0.442	0.816	0.436	0.041
Excellent orthotist and prosthetist should have the patient's best interest at heart_P	0.805	0.058	0.932	0.108
Staff at an excellent orthotics and prosthetics department should understand patient's specific needs_P	0.637	0.717	0.965	0.218
Employees at an excellent orthotics and prosthetics department should give you personal attention_P	0.839	0.569	0.592	0.052
Excellent orthotist and prosthetist should have convenient business hours_P	0.094	0.044	0.565	0.199

ANNEXURE 6: Paired T-Test Scores

		Sig. (2- tailed)
Pair 1	Excellent orthotics and prosthetics facility should have modern equipment _E - Excellent orthotics and prosthetics facility should have modern equipment_P	0.73
Pair 2	The physical facilities at an excellent orthotics and prosthetics department should be visually appealing_E -The physical facilities at an excellent orthotics and prosthetics department should be visually appealing_P	0.41
Pair 3	Staff at medical orthotics and prosthetics should be neat in appearance_E - Staff at medical orthotics and prosthetics should be neat in appearance_P	0.39
Pair 4	Advertising material should be visually appealing at an excellent orthotics and prosthetics department_E -Advertising material should be visually appealing at an excellent orthotics and prosthetics department_P	0.08
Pair 5	When excellent orthotist and prosthetist promise to do something by certain time, they should do so_E -When excellent orthotist and prosthetist promise to do something by certain time, they should do so_P	0.00
Pair 6	When you have a problem, excellent orthotist and prosthetist should show sincere interest in solving it_E - When you have a problem, excellent orthotist and prosthetist should show sincere interest in solving it_P	0.00
Pair 7	Staff at an excellent orthotics and prosthetics department should perform the service right the first time_E -Staff at an excellent orthotics and prosthetics department should perform the service right the first time_P	0.00
Pair 8	Excellent orthotist and prosthetist should deliver its services at the times it promises to do so_E - Excellent orthotist and prosthetist should deliver its services at the times it promises to do so_P	0.00
Pair 9	The staff should inform me about when services will be performed _E - The staff should inform me about when services will be performed _P	0.00
Pair 10	Excellent orthotist and prosthetist should insist on error free records _E - Excellent orthotist and prosthetist should insist on error free records _P	0.00
pair 11	Employees at an excellent orthotics and prosthetics department should give you prompt service _E -Employees at an excellent orthotics and prosthetics department should give prompt service _P	0.00
Pair 12	Employees should always be willing to help you at an excellent orthotics and prosthetics department_E - Employees should always be willing to help you at an excellent orthotics and prosthetics department_P	0.00
Pair 13	Staff at an excellent orthotics and prosthetics department should never too busy to respond to patient requests_E - Staff at an excellent orthotics and prosthetics department should never too busy to respond to patient requests_P	0.00
Pair 14	The behaviour of employees should instil confidence in you_E -The behaviour of employees should instil confidence in you_P	0.04
pair 15	You should feel safe in your transactions with an excellent orthotics and prosthetics department_E - You should feel safe in your transactions with an excellent orthotics and prosthetics department_P	0.00
Pair 16	Employees at an excellent orthotics and prosthetics department should consistently courteous to patients_E -Employees at an excellent orthotics and prosthetics department should consistently courteous to patients_P	0.08
Pair 17	Staff should have the professional knowledge to answer your questions_E - Staff should have the professional knowledge to answer your questions_P	0.04
Pair 18	Staff should give personal attention to customers_E - Staff should give personal attention to customers_P	0.00
Pair 19	Excellent orthotist and prosthetist should have the patient's best interest at heart_E -Excellent orthotist and prosthetist should have the patient's best interest at heart_P	0.01
Pair 20	Staff at an excellent orthotics and prosthetics department should understand patient's specific needs_E - Staff at an excellent orthotics and prosthetics department should understand patient's specific needs_P	0.00
Pair 21	Employees at an excellent orthotics and prosthetics department should give you personal attention_E - Employees at an excellent orthotics and prosthetics department should give personal attention_P	0.02
Pair 22	Excellent orthotist and prosthetist should have convenient business hours_E -Excellent orthotist and prosthetist should have convenient business hours_P	0.03

ANNEXURE 7: Rotated Component Matrix

Dimensions	Rotated Component Matrix										
	Expectation						Perception				
	Component						Component				
	1	2	3	4	5		1	2	3	4	5
Tangible 1	0.346	0.265	0.778	0.164	-0.133		0.106	0.085	0.158	0.118	0.892
Tangible 2	0.296	0.218	0.827	0.201	0.159		0.236	0.205	0.814	0.071	0.061
Tangible 3	0.315	0.155	0.803	0.210	0.220		0.210	0.123	0.816	0.196	0.022
Tangible 4	0.361	0.261	0.711	0.130	0.245		0.116	0.122	0.851	0.153	-0.019
Reliability 5	0.825	0.243	0.340	0.038	0.043		0.788	0.202	0.283	0.178	0.009
Reliability 6	0.759	0.097	0.296	0.152	0.149		0.800	0.265	0.166	0.195	0.021
Reliability 7	0.762	0.185	0.246	0.204	0.049		0.818	0.266	0.114	0.246	0.047
Reliability 8	0.865	0.179	0.163	0.133	0.181		0.875	0.264	0.120	0.095	0.031
Reliability 9	0.805	0.281	0.244	0.114	0.029		0.672	0.293	0.157	0.358	-0.022
Reliability 10	0.709	0.080	0.212	0.439	0.136		0.587	0.365	0.240	0.192	-0.418
Responsiveness 11	0.463	0.384	0.202	0.503	0.196		0.584	0.595	0.201	-0.033	0.024
Responsiveness 12	0.530	0.399	0.050	0.457	0.290		0.510	0.621	0.153	0.241	-0.003
Responsiveness 13	0.211	0.297	0.169	0.743	0.111		0.536	0.637	0.165	0.172	0.000
Assurance 14	0.209	0.513	0.146	0.292	0.588		0.286	0.310	0.247	0.738	0.055
Assurance 15	0.115	0.282	0.155	0.182	0.853		0.118	0.120	0.184	0.545	-0.585
Assurance 16	0.263	0.330	0.180	0.566	0.515		0.387	0.423	0.071	0.596	0.029
Assurance 17	0.269	0.762	0.186	0.233	0.301		0.246	0.388	0.242	0.727	-0.017
Empathy 18	0.092	0.703	0.352	0.400	0.188		0.354	0.746	0.183	0.036	0.020
Empathy 19	0.268	0.834	0.163	0.204	0.152		0.230	0.776	0.107	0.258	-0.045
Empathy 20	0.255	0.743	0.293	0.211	0.219		0.174	0.772	0.034	0.314	0.040
Empathy 21	0.228	0.637	0.212	0.539	0.096		0.150	0.759	0.135	0.362	-0.048
Empathy 22	0.156	0.344	0.290	0.671	0.226		0.357	0.588	0.293	0.184	-0.007

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

ANNEXURE 8: Turnitin Report

PATIENTS PERCEPTION OF SERVICE QUALITY IN MEDICAL ORTHOTICS AND PROSTHETICS DEPARTMENT AT A SELECTED UNIVERSITY

ORIGINALITY REPORT

% 13	% 13	% 1	% 7
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	ir.dut.ac.za Internet Source	% 8
2	Submitted to Holborn College Student Paper	% 1
3	Submitted to University of Northumbria at Newcastle Student Paper	% 1
4	www.diva-portal.org Internet Source	% 1
5	www.essay.uk.com Internet Source	% 1
6	Submitted to Mancosa Student Paper	% 1
7	Submitted to Anglia Ruskin University Student Paper	% 1
8	www.msm.nl Internet Source	% 1