

UNIVERSITY OF KWAZULU-NATAL

**AN EVALUATION OF THE MAINTENANCE ON GOVERNMENT PROPERTIES
IN MPUMALANGA PROVINCE: A SERVICE QUALITY PERSPECTIVE**

By

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Abstract

This research sought to evaluate and analyse customer's perceptions with regard to service quality they receive on the maintenance of government properties within Ehlanzeni District, Mpumalanga Province. The purpose of the study was to establish whether the Department of Public Works (DPW) provides the promised service dependably and reliably; prompt service; caring and individualized attention; and had knowledge and courtesy. The study was based on the survey that used a quantitative approach. The research population was for both DPWs' officials and the customers (tenants) occupying the government properties residing within the Ehlanzeni District area. A probability sample of 97 respondents was drawn with a population size of 200 occupants. The sample was composed of 50.6% males and 49.4% females. Of the sample, 70.7% were tenants of the government residential houses and 29.3% were government officials. Data was collected using the structured questionnaire, from both the DPW officials and tenants about their perceptions on the service quality. The SERVQUAL instrument developed by Parasuraman contained Seven Gaps was adopted to compare the extent of service quality delivered by DPW to its customers. The researcher realized that there were discrepancies between employees' perceptions and management perceptions and it advises the management to focus on building effective communication channels. The gaps identified (i.e. Gap1, Gap 2, Gap 3, Gap 4, Gap 5, Gap 6 and Gap 7) formed key framework for the evaluation of service quality on the maintenance of government properties. It is recommended that the future improvement be identified to address the challenges.

Key Words: Customers' Perception, Service Quality, Service Quality Gap Analysis, Property, Preventive Maintenance and Maintenance Backlog.

TABLE OF CONTENTS

Description	Page
Title Page	i
Confidentiality Clause	ii
Declaration	iii
Acknowledgement	iv
Abstract	v
Table of Contents	vi
List of Annexure	x
List of Figures	xi
List of Tables	xiv

CHAPTER ONE

Orientation

1.1	Introduction	1
1.2	Motivation of the Study	3
1.3	Focus of the Study	3
1.4	Problem Statement	4
1.5	Research Objectives	5
1.6	Research Questions	6
1.7	Hypothesis	6
1.8	Limitation of the Study	7
	1.8.1 The scope of the topic	7
1.9	Research Methodology	8
	1.9.1 Sample size and sampling Techniques	8
	1.9.2 Identifying and Targeting respondents	9
	1.9.3 Administering of Questionnaires	9
1.10	Definitions	9
1.11	Conclusion	11

CHAPTER TWO

Literature Review

2.1	Introduction	12
-----	--------------	----

2.2	Operation of the Environment	12
2.2.1	Operations Management	12
2.2.2	Financial Management	14
2.2.3	Human Resource Management	15
2.3	Policy Frameworks on Maintenance Works and in Mpumalanga Province	16
2.3.1	National Policy Frameworks on Maintenance Works	16
2.4	Best Practices in Service Quality	16
2.4.1	The Concepts of Quality and Service Quality	17
2.4.2	Service Quality and SERVQUAL	18
2.4.3	Total Quality Management (TQM)	23
2.4.3.1	Public enterprise and total quality management	23
2.4.3.2	Challenges to Implementation of TQM in the public sector	24
2.4.3.3	A Case Study: Quality Improvement in Local Authority in the UK	25
2.5	Maintenance Programme	26
2.5.1	The components of a Maintenance Programme	26
2.5.2	Building Property Maintenance	26
2.5.2.1	Preventative Maintenance	27
2.5.2.2	Emergency Maintenance	27
2.5.3	Backlog Maintenance	27
2.5.3.1	The Seven (7) Best Practices	28
2.5.4	The Strategic Objectives of the Maintenance Programme	29
2.5.4.1	Management's perceptions of customer expectations and Management's perceptions about the service	29
2.5.4.2	Selection, training and adequate level of autonomy power and rewards to personnel	30
2.5.4.3	Key performance indicators for maintenance	30
	Building Age	

2.6	In the Eye of the Government: the Status of Strategic Planning for Maintenance in Public Sector	30
2.6.1	Obstacles Limiting Preventive Maintenance in Public Sector	31
2.6.2	Interventions: Policy Framework, Guidelines and others	31
2.6.3	Interventions: Funding for Maintenance	31
2.6.4	The Interventions: Facilities Management as Turnaround Strategy	32
2.6.5	A Strategy for Facilities Management	32
2.6.6	The Intervention: Strategic Property Management	33
2.6.6.1	Key Aspects of Property	34
2.6.6.2	Strategic Framework for Property Management in Mpumalanga Province	35
2.6.6.3	The Stakeholders and their roles in Maintenance Programme	36
2.7	Conclusion	36

CHAPTER THREE

Research Methodology

3.1	Introduction	39
3.2	Objectives of the Study	39
3.3	Sampling Techniques and Description of the Sample	40
3.4	The Research Instrument	41
3.4.1	Description and Purpose	41
3.4.1.1	Construction of the Instrument	42
3.4.2	Pre-testing and Validation	44
3.4.3	Administration of the Questionnaire	44
3.4.3.1	Tenant Interview and Questionnaire Schedule	44
3.4.3.2	DPW Officials' Interview and Questionnaire Schedule	45
3.4.3.3	Instrumentation and Variables in the Study	46

3.5	Conclusion	48
CHAPTER FOUR		
Presentation of Results		
4.1	Introduction	49
4.1.1	Respondents' Characteristics	49
CHAPTER FIVE		
Data Analysis and Interpretation		
5.1	Introduction	84
5.2	Discussions on the dependent Variables	84
5.2.1	Maintenance Programme and the Perceptions	85
5.2.2	Customer's Perceptions and the Physical Conditions of the properties	86
5.3	Discussions on the Independent Variables	87
5.3.1	Quality and SERQUAL	88
5.3.2	The Concept of Maintenance	89
5.3.2.1	Maintenance and TQM in the Public Sector	89
5.4	Discussions on the Reliability, Validity of the Research Finding	91
5.4.1	Discussion on the Described Data	91
5.4.2	Discussion on the Distribution	92
5.4.3	Discussion on Data for Reliability, Dispersion and Correlation	93
5.4.3.1	Cronbach Alpha Test (Reliability Test)	93
5.4.3.2	Discussing the T- Test	93
5.4.3.3	Discussing the ANOVA Test	94
5.4.3.4	Discussion on the Data Correlations	94
5.4.3.5	Data Analysis Using the Chi-Square Test	100
5.4.4	Discussion of the Data Analysis Based on Dispersion	101

5.5	Conclusion	101
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CHAPTER SIX

Conclusions and Recommendations

6.1	Introduction	102
6.2	Conclusion	102
6.3	Recommendations	105
6.4	Conclusion	110

BIBLIOGRAPHY

Annexure A:	Data Analysis in Details-Reliability, Dispersion and Correlation	135
Annexure B:	Data Analysis in Details-Dispersion	168

LIST OF APPENDICES

Appendix A:	Consent letter for respondents (Tenants)	119
Appendix B:	Purpose of survey (Tenants)	121
Appendix C:	Tenants Interview Schedule (General information)	122
Appendix D:	Tenants Interview Schedule for (Physical Properties)	123
Appendix E:	Questionnaire prepared for Tenants	125
Appendix F:	Consent letter for respondents (DPW officials)	127
Appendix G:	Purpose of survey (DPW officials)	128
Appendix H:	Interview Schedule for DPW officials (General information)	130
Appendix I:	Interview Schedule for DPW officials (Physical Properties)	131
Appendix J:	Questionnaire prepared for DPW officials (General information)	133

List of Figures

Page

Figure 2.1: A “Gaps” Model of Service Quality	25
Figure 4.1: Graphical presentation according to age group	63
Figure 4.2: Graphical presentation according to gender group	64
Figure 4.3: Graphical presentation according to Marital Status	65
Figure 4.4: Graphical presentation according to Formal Education	66
Figure 4.5: Graphical presentation according to highest academic professional qualification	67
Figure 4.6: Graphical presentation according to Years of Employment	68
Figure 4.7: Graphical presentation according to main organizational functions	69
Figure 4.8: Graphical presentation of the results of the question: What type of property the tenants occupy?	70
Figure 4.9: Graphical presentation of the results of the question How is the physical appearance of the property?	71
Figure 4.10: Graphical presentation of the results of the question: How long one has been occupying the property?	72
Figure 4.11: Graphical presentation of the results of the question: How the service quality standards are?	72
Figure 4.12: Graphical presentation of the results of the question: How reliable the service rendered to one is?	73
Figure 4.13: Graphical presentation of the results of the question: How the DPW is able to perform the promised service?	74
Figure 4.14: Graphical presentation of the results of the question: How long does DPW take to respond on the complaints?	74
Figure 4.15: Graphical presentation of the results of the question: Whether or not DPW is responsible for the maintenance of properties	75
Figure 4.16: Graphical presentation of the results of the question: How does DPW treat you as an individual in your needs?	76
Figure 4.17: Graphical presentation of the results of the question: How competent are the maintenance artisans?	76

Figure 4.18: Graphical presentation of the results of the question: How competent are the maintenance artisans?	77
Figure 4.19: Graphical presentation of the results of the question: How accessible is your property?	78
Figure 4.20: Graphical presentation of the results of the question: How polite is the property staff?	78
Figure 4.21: Graphical presentation of the results of the question: How often does your property get maintained?	79
Figure 4.22: Graphical presentation of the results of the Statement: The DPW provides world class properties	80
Figure 4.23: Graphical presentation of the results of the Statement: The DPW has modern and clean properties	81
Figure 4.24: Graphical presentation of the results of the statement: The DPW provides variety and quality equipments	81
Figure 4.25: Graphical presentation of the results of the Statement: The DPW provides variety and choices of properties	82
Figure 4.26: Graphical presentation of the results of the Statement: The DPW performs the service quality for the first time	83
Figure 4.27: Graphical presentation of the results of the Statement: The DPW provides property services consistently	83
Figure 4.28: Graphical presentation of the results of the Statement: The DPW provides remedial procedures for emergency repairs	84
Figure 4.29: Graphical presentation of the results of the Statement: The DPW provides reliable maintenance	85
Figure 4.30: Graphical presentation of the results of the Statement: The DPW provides prompt respond to one's request or complaint	85
Figure 4.31: Graphical presentation of the results of the Statement: The DPW provides prompt attention to your specific needs	86
Figure 4.32: Graphical presentation of the results of the Statement: The DPW understands your specific needs	87
Figure 4.33: Graphical presentation of the results of the Statement: The DPW keeps you informed about when services will be performed	87
Figure 4.34: Graphical presentation of the results of the Statement:	88

	The DPW provides sincerity & patience in resolving your problems	
Figure 4.35:	Graphical presentation of the results of the Statement:	89
	The DPW provides safety performance of the property	
Figure 4.36:	Graphical presentation of the results of the Statement:	90
	The DPW employees are knowledgeable to answer customers' questions	
Figure 4.37:	Graphical presentation of the results of the Statement:	91
	The DPW employees are consistently courteous	
Figure 4.38:	Graphical presentation of the results of the Statement:	92
	The DPW provides convenient maintenance schedule	
Figure 4.39:	Graphical presentation of the results of the Statement:	92
	The DPW provides frequent maintenance service by artisans	
Figure 4.40:	Graphical presentation of the results of the Statement:	93
	The DPW has spontaneous care & concern for your needs	
Figure 4.41:	Graphical presentation of the results of the Statement:	94
	The DPW has a sound loyalty programme to recognize you as a frequent customer	

List of Tables	Page
Table 2.1: Quality Improvements in Local Authority in the United Kingdom	34
Table 2.2: The Seven (7) Best Practices	38
Table 2.3: Policy Framework for the Maintenance Programmes	42
Table 2.4: Themes in Strategic Property Management	44
Table 2.5: Three different Aspects of Property	45
Table 2.6: Key Element in the Strategic Framework for Property Management in Mpumalanga Province	47
Table 2.7 Stakeholders in the Maintenance Programme in Mpumalanga Province	48
Table 3.1: Key Elements of the Research method and Approach	54
Table 3.2: Categorization of Questions	57
Table 3.3: Detailed Categorization of Questions	58
Table 3.4: Detailed Categorization of Questions	59
Table 3.5: Detailed Categorization of Questions and Variables	61
Table 4.1.1: Coding of the responses in the questionnaires	95
Table 4.1.2: Central Tendency Statistics I	95
Table 4.1.3: Central Tendency Statistics II	97
Table 4.1.4: Central Tendency Statistics III	99
Table 4.1.5: Central Tendency Statistics IV	101
Table 4.1.6: Cronbach Alpha Test (Reliability Test	104
Table 4.1.7: T- Test I	105
Table 4.1.8: T- Test II	106
Table 4.1.9: T- Test III	107
Table 4.2.0: T- Test IV	108
Table 4.2.1: ANOVA Test and the age group I	109
Table 4.2.2: ANOVA Test and the age group II	110
Table 4.2.3: ANOVA Test and the age group III	111
Table 4.2.4: ANOVA Test and the age group IV	112
Table 4.2.5: ANOVA Test and Marital Status I	113
Table 4.2.6: ANOVA Test and Marital Status II	114
Table 4.2.7: ANOVA Test and Marital Status III	115

Table 4.2.8: ANOVA Test and Marital Status IV	116
Table 4.2.9: ANOVA Test and Education I	117
Table 4.3.0: ANOVA Test and Education II	118
Table 4.3.1: ANOVA Test and Education III	119
Table 4.3.2: ANOVA Test and Education IV	120
Table 4.3.3: Strengths of Relationship	121
Table 4.3.4: Correlations of Coded element s2.1 to s2.5 and s2.6 to s2.10	122
Table 4.3.5: Correlations of Coded element s2.1 to s2.5 and s2.11 to s2.15	124
Table 4.3.6: Correlations of Coded element s2.1 to s2.5 and s2.16 to s2.20	126
Table 4.3.7: Correlations of Coded element s2.6 to s2.10 and s2.11 to s2.15	128
Table 4.3.8: Correlations of Coded element s2.6 to s2.10 and s2.16 to s2.20	130
Table 4.3.9: Correlations of Coded element s2.11 to s2.15 and s2.16 to s2.20	132
Table 4.4.0: Chi-Square Test of Variables s1.1 and s1.2	135
Table 4.4.1: Chi-Square Test of Variables s1.1 and s1.3	135
Table 4.4.2: Chi-Square Test of Variables s1.1 and s1.4	136
Table 4.4.3: Chi-Square Test of Variables s1.1 and s1.6	136
Table 4.4.4: Chi-Square Test of Variables s1.1 and s1.7	137
Table 4.4.5: Chi-Square Test of Variables s1.1 and s1.9	138
Table 4.4.6: Chi-Square Test of Variables s1.4 and s1.5	138
Table 4.4.7: Comparison Dispersion Statistics - s2.1 * b2	139
Table 4.4.8: Comparison Dispersion Statistics - s2.2 * b2	140
Table 4.4.9: Comparison Dispersion Statistics - s2.3 * b2	140
Table 4.5.0: Comparison Dispersion Statistics - s2.4 * b2	141
Table 4.5.1: Comparison Dispersion Statistics - s2.5 * b2	141
Table 4.5.2: Comparison Dispersion Statistics - s2.6 * b2	141
Table 4.5.3: Comparison Dispersion Statistics - s2.7 * b2	142
Table 4.5.4: Comparison Dispersion Statistics - s2.8 * b2	142
Table 4.5.5: Comparison Dispersion Statistics - s2.9 * b2	142

Table 4.5.6: Comparison Dispersion Statistics -s2.10 * b2	143
Table 4.5.7: Comparison Dispersion Statistics -s2.11 * b2	143
Table 4.5.8: Comparison Dispersion Statistics -s2.12 * b2	143
Table 4.5.9: Comparison Dispersion Statistics -s2.13 * b2	144
Table 4.6.0: Comparison Dispersion Statistics -s2.14 * b2	144
Table 4.6.1: Comparison Dispersion Statistics -s2.15 * b2	144
Table 4.6.2: Comparison Dispersion Statistics -s2.16 * b2	145
Table 4.6.3: Comparison Dispersion Statistics -s2.17 * b2	145
Table 4.6.4: Comparison Dispersion Statistics -s2.18 * b2	145
Table 4.6.5: Comparison Dispersion Statistics -s2.19 * b2	146
Table 4.6.6: Comparison Dispersion Statistics -s2.19 * b2	146
Table 4.6.7: Comparison Dispersion Statistics -s2.1 * b1	146
Table 4.6.8: Comparison Dispersion Statistics -s2.2 * b1	147
Table 4.6.9: Comparison Dispersion Statistics -s2.3 * b1	147
Table 4.7.0: Comparison Dispersion Statistics -s2.4 * b1	148
Table 4.7.1: Comparison Dispersion Statistics -s2.5 * b1	148
Table 4.7.2: Comparison Dispersion Statistics -s2.6 * b1	149
Table 4.7.3: Comparison Dispersion Statistics -s2.7 * b1	149
Table 4.7.4: Comparison Dispersion Statistics -s2.8 * b1	150
Table 4.7.5: Comparison Dispersion Statistics -s2.9 * b1	150
Table 4.7.6: Comparison Dispersion Statistics -s2.10 * b1	151
Table 4.7.7: Comparison Dispersion Statistics -s2.11 * b1	151
Table 4.7.8: Comparison Dispersion Statistics -s2.12 * b1	152
Table 4.7.9: Comparison Dispersion Statistics -s2.13 * b1	152
Table 4.8.0: Comparison Dispersion Statistics -s2.14 * b1	153
Table 4.8.1: Comparison Dispersion Statistics -s2.15 * b1	153
Table 4.8.2: Comparison Dispersion Statistics -s2.16 * b1	154
Table 4.8.3: Comparison Dispersion Statistics -s2.17 * b1	154
Table 4.8.4: Comparison Dispersion Statistics -s2.18 * b1	155
Table 4.8.5: Comparison Dispersion Statistics -s2.19 * b1	155
Table 4.8.6: Comparison Dispersion Statistics -s2.20 * b1	156
Table 4.8.7: Comparison Dispersion Statistics -s2.1 * s1.1	156
Table 4.8.8: Comparison Dispersion Statistics -s2.1 * s1.1	157
Table 4.8.9: Comparison Dispersion Statistics -s2.3 * s1.1	157

Table 4.9.0: Comparison Dispersion Statistics - s2.4 * s1.1	158
Table 4.9.1: Comparison Dispersion Statistics - s2.5 * s1.1	158
Table 4.9.2: Comparison Dispersion Statistics - s2.6 * s1.1	159
Table 4.9.3: Comparison Dispersion Statistics - s2.7 * s1.1	159
Table 4.9.4: Comparison Dispersion Statistics - s2.8 * s1.1	160
Table 4.9.5: Comparison Dispersion Statistics - s2.9 * s1.1	160
Table 4.9.6: Comparison Dispersion Statistics - s2.10 *s1.1	161
Table 4.9.7: Comparison Dispersion Statistics - s2.11 *s1.1	161
Table 4.9.8: Comparison Dispersion Statistics - s2.12 *s1.1	162
Table 4.9.9: Comparison Dispersion Statistics - s2.13 *s1.1	162
Table 4.9.10: Comparison Dispersion Statistics-s2.14 *s1.1	163
Table 4.9.11: Comparison Dispersion Statistics-s2.15 *s1.1	163
Table 4.9.12: Comparison Dispersion Statistics-s2.16 *1.1	164
Table 4.9.13: Comparison Dispersion Statistics-s2.17 *1.1	164
Table 4.9.14: Comparison Dispersion Statistics-s2.18 *1.1	165
Table 4.9.15: Comparison Dispersion Statistics-s2.19 *1.1	165
Table 4.9.16: Comparison Dispersion Statistics-s2.20 *1.1	166
Table 4.9.17: Comparison Dispersion Statistics - s2.1 * b3	166
Table 4.9.18: Comparison Dispersion Statistics - s2.2 * b3	167
Table 4.9.19: Comparison Dispersion Statistics - s2.3 * b3	167
Table 4.9.20: Comparison Dispersion Statistics - s2.4 * b3	168
Table 4.9.21: Comparison Dispersion Statistics - s2.5 * b3	168
Table 4.9.22: Comparison Dispersion Statistics -s2.6 * b3	169
Table 4.9.23: Comparison Dispersion Statistics - s2.7 * b3	169
Table 4.9.24: Comparison Dispersion Statistics - s2.8 * b3	170
Table 4.9.25: Comparison Dispersion Statistics - s2.9 * b3	170
Table 4.9.26: Comparison Dispersion Statistics - s2.10 * b3	171
Table 4.9.27: Comparison Dispersion Statistics - s2.11 * b3	171
Table 4.9.28: Comparison Dispersion Statistics - s2.12 * b3	172
Table 4.9.29: Comparison Dispersion Statistics - s2.13 * b3	172
Table 4.9.30: Comparison Dispersion Statistics - s2.14 * b3	173
Table 4.9.31: Comparison Dispersion Statistics - s2.15 * b3	173
Table 4.9.32: Comparison Dispersion Statistics - s2.16 * b3	174
Table 4.9.33: Comparison Dispersion Statistics - s2.17 * b3	174

Table 4.9.34: Comparison Dispersion Statistics - s2.18 * b3	175
Table 4.9.35: Comparison Dispersion Statistics -s2.19 * b3	175
Table 4.9.36: Comparison Dispersion Statistics - s2.20 * b3	176
Table 5.1: The Challenges to Implementation of TQM in Public Enterprises	185

GLOSSARY

NIMS	National Infrastructure Maintenance Industry
GIAMA	Government Immovable Asset Management Act
NDPW	National Department of Public Works
MDPW	Mpumalanga Department of Public Works
DPW	Department of Public Works
OSHA	Occupational Safety Health Administration
SERVQUAL	Service Quality
SABS	South African Bureau of Standards
BMS	Building Management System
RAMP	Repair and Maintenance Programme

CHAPTER ONE

INTRODUCTION

1.1 Introduction

The Mpumalanga Department of Public Works (MDPW) is the custodian of all the government immovable assets in the province and its role is to provide, manage and maintain all these assets. These assets include both office complexes and residential properties. The research will mainly focus on the residential properties within the Ehlanzeni District. The study will outline the current state of government immovable assets in Mpumalanga Province that is of greatest concern when it comes to repair and preventive maintenance.

The province has ±1 200 residential properties whereby 500 are situated within the Ehlanzeni district. The MDPW is mandated with the mammoth task of ensuring that these infrastructures are well maintained and operational. Unfortunately, the current state of affairs has left many of these buildings dilapidated. Larger institutions like-Telkom and Transnet are performing the best with regard to the quality of maintenance.

The National Infrastructure Maintenance Strategy (NIMS, 2006) approved by the Cabinet in August 2006, it describes the framework for a co-ordinated programme of actions which is vital to the government's vision of delivering infrastructure services to all by all spheres of the government. The parliament has passed the Government Immovable Asset Management Act, 2007 (GIAMA, 2007) that aims at ensuring the uniform framework for the management of immovable assets used by the national and provincial departments in support of its service delivery objectives.

The study will intend on how the study will achieve its objectives. From the service quality perspective as defined by Parasuraman & Zeithaml (1988) and Berry (1985), "the difference between customer perceptions of the current service being provided by a given organization and customer expectations of excellent service within that given industry", it is clear that there is unacceptable gap between

expectations of the people of Mpumalanga province and the service given. This is the main reason for this study titled the “***An evaluation of the maintenance on government properties in Mpumalanga Province: A service quality perspective***”. Out of this study, the researcher/ author believes that through systematic interventions and management processes coupled with political will, the scenario can be reversed.

The report is structured into six chapters. Outlining the background of the management structure and processes in **Chapter One** (1) and also state the importance of this study. **Chapter Two** (2) highlights the best practices, debates, controversies, challenges that emanates from employing the knowledge that are in the literature covering management from operations, financial, human resources, and also covering concepts of quality, service quality, Continuous improvement, preventive maintenance, backlog maintenance and SERVQUAL.

The purpose of the study, research design, methodology, and questionnaire design and data collection are presented in **Chapter Three** (3). **Chapter Four** (4), presents tabulated data from both the secondary and primary sources as well the analysis of such data. A detailed discussion is also presented linking the theoretical issues uncovered from the literature review to the overall picture presented by the data findings.

The report is summed up with a conclusion that highlights the urgent need to employ best practice systems and ensure that the current dilapidation of provincial infrastructure is addressed and processes set up to roll out a continuous programme of reducing “the difference between customer perceptions of the current service being provided by a given organization and customer expectations of excellent service within that given industry”, as pointed out by Stevenson (2002).

Chapter Five (5) outlines the interpretation, and discussion of the research findings of the study in conjunction with readings, and case studies. **Chapter six** (6) of the report presents the conclusion and recommendations, although not

exhaustive, but those that this author/ researcher considers to be cardinal for the realization of the quality service and service quality.

1.2 Motivation of the Study

An evaluation of the maintenance on government properties in Mpumalanga Province: A service quality perspective, as a dissertation exercise, aims at evaluating the customer's perception on the physical condition of the existing residential properties. The study also makes recommendations to DPW on gaps identified in meeting the customer perceptions and overall stakeholders' perceptions and needs.

The findings of the study may be beneficial to the national and provincial governments in general and the MDPW in particular. The benefits include better understanding of the level of the service and the customers' perceptions about the maintenance on government properties. Furthermore, the department may, with this insight information, strategically review the current programme and institute further improvements to the maintenance programme framework and implementation plan to enable it to realize its mandate to maintain public infrastructure in the province.

The national sphere of government may also harmonize the maintenance policy framework towards quality assured service. The study reinforces the understanding that the public sector, although considered too bureaucratic, has potential to employ the strategic approaches to service delivery at the same level as the private sector.

It confirms that service quality approach can be used and is useful tool for the evaluation of public sector programmes because these programmes have social benefits that are difficult to measure either in return on investment approach or time value for money.

1.3 Focus of the Study

The study focuses on the customer's perception on the maintenance of residential houses with regard to its service quality. The study focuses on the implementation

of the preventive maintenance, emergence maintenance and the effort to address the backlog of dilapidated buildings in the province.

The focus is the quality of service rendered in the current maintenance programme and whether it is meeting the customers' expectations. Its framework outlining the positions of all stakeholders in the programme. Using the service quality concept, the evaluation provides the necessary understanding of the programme.

1.4 Problem statement

The state of public buildings are due for repair and renovations in the Mpumalanga Province shows that maintenance programme is not effective (NIMS, 2006). In 2006, an evaluation of the MDPW uncovered the existence of poor operations management; financial management and human resource management to achieve implementation of maintenance programme along with other programmes (NIMS, 2006).

Second, poor operations management; financial management and human resource management are looked from the effectiveness of the organization environment and the relationship with the customer. The study concludes that these are the only factors affecting the achievement of effective maintenance of government property, to the current level of dissatisfaction of the customers?

The challenges do exist and are correctly attributed to be the main cause, but to achieve customer satisfaction, as articulated by the concept of quality service, which is the cornerstone of the mission of the Department, it is argued that customers' perspective of the service received from the programme should be considered and the relationship evaluated. The argument is that understanding the concepts and relationships and addressing the causal effects of such may add value to the programmes.

According to Parasuraman (1985) ; Lewis & Mitchell (1990) service quality can be defined as the difference between customer expectations of service and perceived service. If expectations are greater than performance, then perceived quality is less than satisfactory and hence customer dissatisfaction occurs. In agreement

with above observation, it follows that, if performance exceeds expectations, then equally satisfaction is guaranteed, unless there are other factors. Further, it should be argued that unless such opposing factors, their source, relationships and influence on the programme, influence on the beneficiary of such a programme are understood and factored into the intervention strategies, it is not possible to implement an effective turnaround programme that can effectively address the challenges experienced in the maintenance programme in Mpumalanga.

This study, therefore, evaluated the quality of service that is being provided to the DPW's customers (i.e. its tenants) in Mpumalanga Province, from the customers' perspectives and in the light of the management problems that the Province is experiencing, and found that it is not only these problems identified in the NIMS report of 2006, but the factors such as sincerity, patience consistently courteous, just to mention a few, that respondents thought DPW was not providing. These may seem elementary, but these factors need to be identified, their negative repo effect on the maintenance programme mitigated for service quality to be achieved.

1.5 Research Objectives

Based on the aim of the study and the research problem articulated above, the research objectives are to:

- 1.5.1 evaluate the customer's perceptions about the physical condition of the properties being rented and occupied.
- 1.5.2 evaluate the customer's perceptions about the DPW's ability to perform its promised services dependably and reliably.
- 1.5.3 evaluate the customer's perceptions about DPW's willingness to help tenants and provide a prompt service;
- 1.5.4 evaluate the customer's perceptions about DPW's knowledge and courtesy;
- 1.5.5 evaluate the customer's perceptions about the caring and individualized attention that DPW provides to its customers;
- 1.5.6 make recommendations to DPW that will assist in developing the strategies to improve its service quality.

1.6 Research Questions

The following are the research questions that will seek to achieve the above mentioned research objectives:

- 1.6.1 What are the customer's perceptions about the physical condition of properties being rented and occupied?
- 1.6.2 What are the customer's perceptions about the DPW's ability to perform its promised services dependably and reliably?
- 1.6.3 What are the customer's perceptions about DPW's willingness to help tenants and provide a prompt service?
- 1.6.4 What are the customer's perceptions about DPW's knowledge and courtesy?
- 1.6.5 What are the customer's perceptions about the caring and individualized attention that DPW provides to its customers?

1.7 Hypothesis

Lind, Marchal and Withen (2005: 317) define a hypothesis as **“a statement about a population parameter developed for the purpose of testing”**. The Webster Dictionary (1997: 534) defines a parameter as **“a quantity whose value characterizes population or a physical property whose value determines the characteristics or behavior of a system”**.

In the title of this study, there are two key variables the one identifies: the maintenance programme and quality of service realized from the programme. Within the maintenance programme, there are customers and officials who are beneficiaries of the service rendered by the maintenance programme and these customers have perceptions and expectations.

In this study, the customers are the population and their expectations are the parameters. Similarly, the maintenance programme involves building infrastructure and the conditions of these buildings are determined by the level of maintenance work applied to such buildings. The number of buildings covered in the programme is the population whereas the physical status –dilapidation or well maintained – is the characteristic of the maintenance programme. Dilapidation or well maintained is measurable in the continuum setup within the concept of quality.

1.8 Limitation of the Study

Limitation of the research is controlled by the scope of the topic (i.e. the adopted sample size and sampling technique, the procedure of identifying and targeting the respondent, the approach in administering the questionnaire, and the time of responses). Each of these played a specific and significant role in the findings of the study and key to the validity and reliability of the findings.

1.8.1 The scope of the topic

Although DPW is the custodian of all building infrastructure and the maintenance programme include offices, clinics, hospitals, schools etc. The study is limited to the maintenance of government residential building infrastructure within Ehlanzeni District. Currently, the maintenance programme involves preventive maintenance implemented under the period contract, emergence maintenance implemented on *ad hoc* basis, and the maintenance on the backlog list of buildings popularly referred to as 'Backlog Maintenance'.

The study applies to the preventive maintenance implemented under the periodic contract and the emergence maintenance implemented on *ad hoc* basis. The concept of quality service, although not the only evaluation tool, is applied in this study as the basis for the evaluation of the maintenance programme in Mpumalanga province as implemented by the DPW. Service Quality, in the context of SERQUAL, is determined by the existence of gaps such as;

Gap 1: Customer's expectations versus management perceptions,

Gap 2: Management perception versus service specifications,

Gap 3: Service specifications versus service delivery,

Gap 4: Service delivery versus external communication,

Gap 5: The discrepancy between customer expectations and their perceptions of the service delivered,

Gap 6: The discrepancy between customer expectations and employees' perceptions,

Gap 7: The discrepancy between employee's perceptions and management perceptions (discussed in detail below). The study is centered on evaluating the maintenance programme based Gap 5: The discrepancy between

customer expectations and their perceptions of the service delivered, which translates into perception about the maintenance programme and the ability of the DPW to deliver on its mandate. Although centered on Gap 5, some aspects in the others Gaps (1, 2, 3, 4, 6, and 7) are used to evaluate the maintenance programme and are included in the discussion.

1.9 Research Methodology

1.9.1 Sample Size and Sampling Technique

Lind, Marchal & Wathen (2005) noted that a sample is 'a portion, or part, of the population of interest. Curwin & Slater (2002: 40) stated that the sample size is determined by: the accuracy required, the variability of the population, and the detail required in analysis. The two authors also noted the need for representation of the sample on the population for the purpose of generalization.

In the study, a random sampling approach was used to determine the size from the population. The random sampling approach could simple be random, stratified random or cluster sampling (Lind, Marchal & Wathen, 2005: 254). According to Parahoo (1997: 218), a research population includes all units from which data can be collected, and that a sample is a proportion or subset of the population. A sample is a "subset of the entities that make up the entire population" (Polit & Hungler, 1997:174).

In order for a representative sample to be drawn, a researcher should make the sampling criteria known before data collection begins. Sampling criteria is regarded as "the characteristics that are essential for conclusion in the target population (Burns & Grove, 1999:227).

The sample included tenants occupying government houses and officials involved in the maintenance programme. DPW has ±1 200 residential properties on its property inventory that are occupied and forms part of the current maintenance programme. Both Ehlanzeni District and Head Quarters have 50 officials that are directly involved in the maintenance programme and some were targeted for the study. The officials' (population) are stratified as, 5 senior managers, 7 managers,

10 middle managers, 8 technicians, and 20 artisans were based at the above mentioned districts.

1.9.2 Identifying and Targeting Respondents

Using a stratified random sampling technique 92 respondents were identified and targeted. Out of the 92 respondents, 60 respondents were tenants and 27 respondents were DPW officials and 5 of the respondents could not provide feedback. The purpose of the grouping and stratifying randomly is to guarantee that each group is represented in the sample' (Lind, Marchal & Wathen, 2005: 254).

1.9.3 Administering of Questionnaires

Curwin and Slater (2002: 34) observed that secondary data, although cheaper to collect, may not be adequate for a specific study. Therefore, primary approach such as the questionnaire method employed in this study provided data as presented in chapter three, which is the subject of discussion in chapter four.

The questionnaires, structured questions (refer to Appendix A-J) were administered by support staff from the maintenance section. The support staff was selected based on their ability to communicate in all South African official languages and their interpersonal skills. A total of 8 staff was recruited. The 8 staff were inducted or trained and exposed to the content and structure of the questionnaire, the purpose of the study and the general conduct in interacting with the respondents.

1.10 DEFINITIONS

There are many definitions of preventive maintenance, backlog maintenance, quality, service quality, continuous improvements and SERVQUAL, but for the purpose of this study, the definitions below was considered to be more appropriate for the basic understanding of the topic without indulging into philosophical discourse, which due to time constraint, has been deliberately scaled down.

A. Preventative Maintenance

The National Infrastructure Maintenance Strategy, 2006 (NIMS, 2006) defines preventive maintenance as the “actions performed to retain an asset in its required condition standard and to prevent failure by providing systematic inspection and monitoring to detect and prevent incipient deterioration or failure and includes testing to confirm correct operation”.

B. Backlog Maintenance

The National Infrastructure Maintenance Strategy, 2006 (NIMS, 2006) defines backlog maintenance As “Any maintenance that should have been done during the previous maintenance cycles but were deferred, cancelled or not done as a result of a lack of funds or other reasons”.

C. Quality

Quality is referred to as ‘fitness for purpose’ or ‘meeting customer requirements’ or conformance to customer specifications. For the purpose of this study, and in agreement with Stevenson (2002), Quality is seen as ‘consistently exceeding customer expectations’.

D. Service Quality:

Service quality is defined as “the difference between customer perceptions of the current service being provided by a given organization and customer expectations of excellent service within that given industry” (Parasuraman, Zeithaml, & Berry 1985, 1988).

E. Continuous Improvement

It is a concept which seeks to improve all factors related to the processing of the inputs into outputs on an ongoing basis. Stevenson (2002) points to equipment, methods, materials, and people.

F. SERVQUAL:

It is defined as a technique that can be utilized to perform a gap analysis of an organization’s service quality performance against customer service quality needs, (Zeithaml, Parasuraman & Berry (1988).

1.11 Conclusion

Despite DPW, as custodian of public building infrastructure, implementing a maintenance programme, the province has many dilapidated buildings on its backlog lists. The study evaluates the customers' perceptions about the maintenance programme with the main objective of understanding the programme from the service quality perspective. The study focuses on the maintenance of residential properties under the DPW some of which are dilapidated. The study's findings may be useful in improving the current programme or re-adjustment of the maintenance policy framework and is therefore valuable to the DPW, the national government and the general public that are concerned in the quality of service.

The hypotheses tested in the study are that maintenance programme have elements of service quality, but it is **not** formulated based on the tenets of service quality. The customer's perceptions about the physical condition of the properties being rented and occupied, influences the customer's perceptions about the DPW's ability to perform its promised services dependably and reliably among others the current programme.

The population studied includes the tenants occupying government houses and officials that are directly involved and some that are indirectly involved in the maintenance programme. A random sampling approach is used to identify and targeting the respondents and using staff within the maintenance programme, the questionnaires were administered with a waiting time limit of 2 weeks. The staff selected to administer the questionnaire were inducted and trained on the content, structure of the questionnaire as well as the general behaviour when in contact with the respondents.

Chapter one provided the motivation, focus, problem statement, objectives and set up the hypotheses to be tested.

The next chapter presents a literature review, the deeper understanding of issues, concepts and other elements that are cardinal to the study.

CHAPTER TWO

Literature Review

2.1 Introduction

Literature review informs the study of the result of other studies; it highlights the dialogues in the literature about the topic. It also pinpoints the filling of gaps on prior studies. The chapter adequately points out the results of prior studies, guide the study along the dialogues, point out the gaps that need to be filled. The aim is to comprehend the concepts, process and strategies identified in Chapter 1 (Creswell, 2003: 29).

Chapter 2 is a review of literature from secondary sources, *inter alia* books and journals, the later online or hard copies, conference papers, government documents, just to mention a few. As indicated in Chapter 1 under the research questions this chapter is divided into two; the first section covers literature on the concepts of quality and maintenance and second directs itself to the status of strategic planning for maintenance in public sector. These concepts are discussed within the view of the concept of customer and their perceptions. The second section of this chapter looks at the literature on the design and administration of questionnaires as well as the literature on the data analysis and techniques.

2.2 Operation Environment

The critical issues that characterizes the maintenance programme under DPW are identified in the operation of the directorate, the level and mode of funding to the programme and well as the human capitals as discussed below.

2.2.1 Operations Management

According to (NIMS, 2006) all spheres of government face the challenge of operations management and maintaining old and new infrastructure. The (GIAMA, 2007) requires government properties to be well maintained and be looked after in order to serve the need of the government. The content of the maintenance work required for these properties includes repairs, preventative measures, upgrading,

refurbishment and planned maintenance and these must be done at scheduled intervals.

The Strategic Performance Plan for DPW, 2004/2009 aims at aligning the operational plans of both head office and four regions pertaining property maintenance. The DPW head office maintenance component part of the strategic plan requires that the policies formulated with regard to property maintenance is effectively and efficiently implemented at all regions. Their operational plans are aiming at addressing the maintenance of offices and residential properties within the province. However the building maintenance policy is still in a draft form and has not yet been implemented.

The maintenance request system, works orders are created manually and not in order of its priority by the inspectors in the regions. As a result a maintenance backlog has been created. In addition, these government properties are often left unattended which result in vandalism occurring. Furthermore the property records went missing and have been irrecoverable. Thus there is a lack of an accurate asset register.

Lack of an accurate asset register became a problem to ascertain which properties belonged to the DPW and also which properties require maintenance. This inability to identify property assets has resulted in the Department being unable to identify and categorize properties according to maintenance need e.g. whether the required maintenance was preventative, unplanned or reactive maintenance (DPW Lease Agreement, 2008).

Although a high volume of complaints from customers have been received and acknowledged by DPW with regard to the poor maintenance of government properties. The tenants are still compelled to pay on a monthly basis. These complaints indicate that the service quality received is not impressive enough to satisfy their basic needs. Complaints have been communicated to the DPW through mails, faxes, telephonically and through word of mouth and records have been kept for those complaints (Works Order, 2008/09).

Lot of property maintenance complaints are from the executive members and are frequently dealt with promptly by the regions. DPW is unable to handle all the maintenance backlog challenges due to insufficient budget. They are unable to satisfy the customer's needs as per their request. Some of those customers perceive that to possess the government property is a privilege and unaware of the maintenance cost implications and yet dependant on the government housing subsidy. Currently the housing policy is in a draft form and thus will require all tenants to pay the market related prices once those government properties get maintained.

Property lease agreements are also problematic in that they are signed, between the landlord and the tenant irrespective of the condition of the property they allocate. Whole certain clauses of the lease agreement compel the tenants to maintain minor work in the property; major maintenance is the responsibility of the DPW. The tenants are not allowed to convert those properties for commercial purpose. Sub letting is also misconduct and prohibited. Even though there are certain government properties that are uninhabitable and that undermine the tenant's rights in terms of basic need requirement yet the tenant is compelled to pay full rent for the property usage.

2.2.2 Financial Management

Historically, there has been an inadequate budget allocation for maintenance. This has resulted in a major maintenance backlog (DPW-Draft Maintenance Policy, 2007). The cost for not maintaining infrastructure is no longer affordable to South Africa. The maintenance strategy further put emphasis on the retention of ten percent of the cost price for maintenance purpose. The DPW is funded by both the Treasury and its own rental collection. The DPW is experiencing ineffective revenue collection from the client departments as there is still that perception of unwillingness to pay for the property rentals. Currently the responsibility of revenue collection is still within the client departments. Ineffective revenue collection from client department's tenants had an impact towards addressing the maintenance backlog of the residential properties at large (NIMS, 2006).

According to (GIAMA, 2007) passed by the Parliament requires all the users of government properties to budget for the maintenance of the properties they are occupying. Ineffective budgeting planning by the departments on a yearly basis had posed delays in budget allocation by Treasury. Furthermore, poor budget planning had also contributed to the increase of the maintenance backlog. The non existence of the infrastructure plan had contributed to the ill informed budget planning decisions. Thus, the funding available for asset maintenance is compromised by poor budgeting and poor rent collection.

2.2.3 Human Resource Management

NIMS (2006) have identified the shortage of skills that have a detriment effect towards the service delivery. Currently the department is faced with the shortage of built environment professionals in addressing the maintenance backlog as such they take the skills with to other departments or to other countries in the world. The huge proportion of the trained staff with regard to the technical staff had retired and will retire in the next ten years, whereby some are taking with them much of the institution's skill, experience.

The passing of skills to the newly appointed personnel may be difficult, given the fact that some of the institutions have a shortage of adequately trained younger staff, particularly between 15-25 years of experience. There is no skills retention strategy in place to address the scarce skills. Another contributing factor, most artisans have retired from the sector and without any replacement. There are few artisans who can execute the maintenance work in the Province and yet the department is outsourcing the work to the external service providers to enhance service delivery.

Thus, there is a lack of skilled personnel to maintain the DPW's assets. DPW has to identify the training need through the Human Resource Development (HRD) section to enhance personnel skills required for the maintenance of government properties.

2.3 Policy Frameworks on Maintenance Works and in Mpumalanga Province

As earlier mentioned, Mpumalanga Provincial Government, Department of Public Works is the custodian of all the government's immovable assets in the province and its role is to provide, manage and maintain all of those assets. Therefore, the study aims at evaluating the maintenance programme on the government properties in Mpumalanga Province as implemented by DPW and this research mainly focuses on the residential properties only (Strategic Performance Plan for Public Works 2004/2009). Most of these are situated in urban areas and some in rural areas. The maintenance programmes by other departments within the province, for example Department of Education, are not part of this evaluation, although these are also important within the vision of the provincial leadership.

2.3.1 National Policy Frameworks on Maintenance Works

The National Government, realizing the maintenance challenge before it, came up with the National Infrastructure Maintenance Strategy (NIMS, 2006) that was approved by the Cabinet in August 2006, and NIMS outlines the framework for a co-coordinated programme of actions. Within NIMS, one sees the vital part of the government's vision of delivering well maintained infrastructure to all spheres of the government.

Furthermore, the Parliament has passed the Government Immovable Asset Management Act of 2007 (GIAMA, 2007), that aims at ensuring the uniform framework for the management of immovable assets used by national and provincial departments in support of its service delivery objectives. It is argued in this study that the framework is adequate, but there is need to have strategies in place that will ensure the realization of the vision envisaged within the framework.

2.4 Best Practices in Service Quality

Service quality is defined as a focus on meeting the customer's needs and requirements, and further explains on how well the service delivered matches the customers' expectations. In recent years, greater emphasis has been placed on the need to understand the role of expectations (Pitt & Jeantrout, 1994).

Dotchin and Oakland (1994) state that people are becoming more discerning and critical of the quality of service that they experience. The customer perceptions and expectations of service quality are increasingly used to forecast company profitability and prospects for improved market share. Other initiatives have often failed to enhance company performance; customer perceived service improvements have been shown empirically to improve profitability (Buzzell & Gale, 1987).

Nowadays managers are under increasing pressure to ensure that their services are customer focused and to ensure that continuous improvement is being delivered. Managers are tasked to understand the customer's expectations and to identify gaps with regard to service quality, since such information will assist managers in identifying cost effective ways of addressing service quality gaps in order to make decisions based on those scarce resources (Shahin, 2008).

Service quality can be defined as the difference between customer expectations of service and perceived service. If expectations are greater than performance, then perceived quality is less than satisfactory and hence customer dissatisfaction occurs (Parasuraman, 1985; Lewis & Mitchell, 1990). In DPW, its poor rent collection which impacts negatively on the amount of funds that are available to engage in property maintenance activities.

In addition DPW has its own internal problems of poor operations management, poor financial management and poor human resource management. It therefore becomes important to evaluate the quality of service that is being provided to its customers (i.e. its tenants), given that it is experiencing these management problems.

2.4.1 The Concepts of Quality and Service Quality

The section looks at the concept of quality, service quality and the technique of SERVQUAL, and Total Quality Management. According to the Webster dictionary (1997: 599) quality is defined as 'peculiar and essential character or degree of excellence' meaning it is embedded in the attributes of something being looked at.

In terms of a service, such as maintenance, it is the attribute in the programme resources, structure and processes that should have the degree of excellence for the service to be of good quality.

As referred to earlier, Stevenson (2002) noted that quality is referred to as 'fitness for purpose' or 'meeting customer requirements' or conformance to customer specifications and 'consistently exceeding customer expectations'. Key in this note is that the purpose has to be clear and customer requirements must be clearly identified and defined for the programme to meet such requirements. Therefore one argues that quality should be managed.

Burke (2006: 240) quoting the Project Management Body of Knowledge (PMBOK) manual posit that quality management involves the process, management of the project (s) and the product(s) of the projects. To achieve this, according to Burke, quality management covers quality planning, quality control and quality assurance.

2.4.2 Service Quality and SERVQUAL

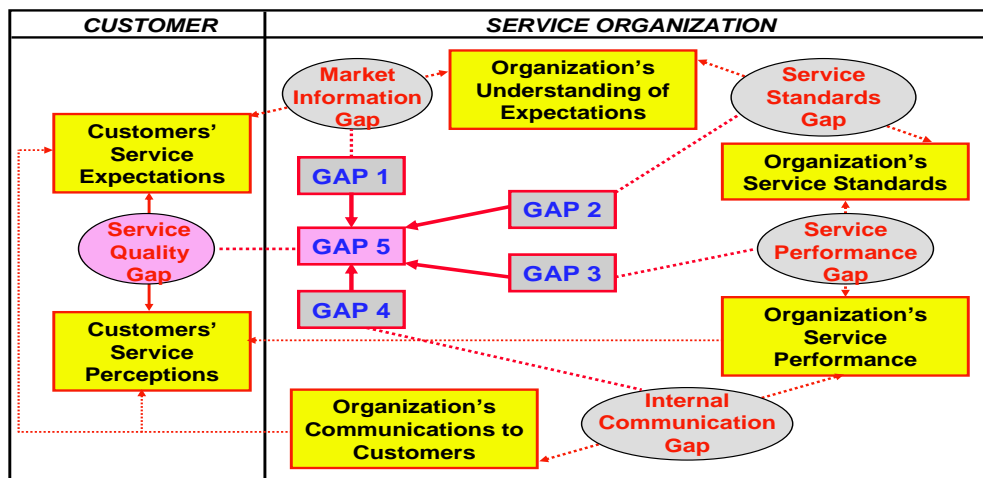
The process of planning has an output of quality control plan that is used to control the implementation towards quality achievement. It is in the planning phase that the customers' expectations are investigated and planned for. It is also a review of the customer perceptions for the current service and put measures to address such perceptions.

The difference between perceptions and expectations of the customers of a service is, according to Parasuraman, Zeithaml (1985) & Berry (1988), in their own words that service quality is defined as "the difference between customer perceptions of the current service being provided by a given organization and customer expectations of excellent service within that given industry".

From this definition, it is clearly notable that the service quality can be quantified and measured, and thereby understanding the shortfall of the programme deeper and in addition to poor management as noted earlier in the study.

There is a technique that can be utilized to perform a gap analysis of an organization's service quality performance against customer service quality needs (Zeithaml, Parasuraman & Berry (1988), it is known as **SERVQUAL**. In developing this technique, Parasuraman et al (1995) identified seven major gaps in the service quality and three of those important gaps (i.e. **Gap 1; Gap 5 & Gap 6**) are also identified by ASI Quality Systems (1992), Curry (1999), Luk & Layton(2002) refer to Figure 1 below.

A "GAPS" MODEL OF SERVICE QUALITY



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5

Figure 2.1: A "GAPS" Model of Service Quality, Source: Parasuraman et al (1995).

As graphically outlined in figure 1 above, the gaps identified critical for this study are seven (7) and elaborated below.

Gap 1: Customer's expectations versus management perceptions

The gap exists as a result of the lack of a marketing research orientation, inadequate upward communication and too many layers of management.

Gap 2: Management perception versus service specifications:

The gap exists as a result of inadequate commitment to service quality, a perception of unfeasibility, inadequate task standardization and an absence of goal setting.

Gap 3: Service specifications versus service delivery

This gap exists as a result of role ambiguity and conflict, poor employee-job fit and poor technology-job fit, inappropriate supervisory control system, lack of perceived control and lack of team work.

Gap 4: Service delivery versus external communication

This gap exists where there is inadequate horizontal communications and propensity to over-promise.

Gap 5: The discrepancy between customer expectations and their perceptions of the service delivered

This gap is as a result of the influences exerted from the customer side and the shortfalls (gaps) on the part of the service provider. In the case, customer expectations are influenced by the extent of personal needs, word of mouth recommendation and past service experiences.

Gap 6: The discrepancy between customer expectations and employees' perceptions

This gap is as a result of the differences in the understanding of customer expectations by front-line service providers.

Gap 7: The discrepancy between employee's perceptions and management perceptions

This gap is as a result of the differences in the understanding of customer expectations between managers and service providers. The gaps identified above are cardinal to this study and forms key framework for the evaluation of maintenance programme in Mpumalanga. Gap 1, Gap 2, Gap 3, Gap 4, Gap 6 and Gap 7, are gaps within functions of the way in which service is delivered (Brown & Bond, 1995).

What this means is that the organization structure, culture are part of the gaps and needs to be factored into the programme for it to achieve service quality. Brown and Bond (1995) identified Gap 5 as pertaining to the customer and as such perceived to be the true measure of service quality; it is asserted that "The

measurement of service quality in the service sector has to take heed of the customer expectations of service and perceptions of service". One notes that quality, customer perceptions are elements of abstract with little pictorial interpretation, hence measuring quality is subject to disagreements. Robinson (1999) observed and concluded that "It is evident that there is little consensus on opinion and much disagreement about how to measure service quality".

According to Gronroos, (1982), Lewis & Booms (1983); Parasuraman *et al.* (1985) SERVQUAL is the tool to measure service quality and has been used to compare customer's expectations prior a service encounter and their perceptions of the actual service delivered. In this study, SERVQUAL is applied because of limitation in time. The five generic dimensions or factors identified by Van Iwaarden, J., van der Wiele, T., Ball, L., & Millen, R. 2003, as key elements in Gap 5 are considered as follows:

Tangibles: Physical facilities, equipment and appearance of personnel.

Reliability: Ability to perform the promised service dependently and accurately. According to Shawyun (2000) reliability involves consistency of performance and dependability and implies that the firm performs the service right at the first time. It also implies that the firm honors its promises and specifically involves: accuracy in billing, keeping records correctly, performing the service at the designated time.

Responsiveness: Covers the organization's willingness to help customers and provide prompt service. This concerns the willingness or readiness of employees to provide service. It involves timeliness of service: mailing a transaction slip immediately, calling the customer back quickly, and giving prompt service (e.g. setting up appointments quickly)

Assurance: Includes competence, courtesy, credibility and security. The organization should have knowledge of its customers and ensure courtesy of employees to the customers and employees should have ability to inspire trust and confidence. Parasuraman (1988), states that courtesy involves: politeness,

respect, consideration, and friendliness of contact personnel (including receptionists, telephone operators, etc.).

Empathy: Includes access, communication, understanding the customer. It also entails caring and individualized attention that the firm provides to its customers. Communication means keeping customers informed in language they can understand and listen to them. It may imply that the company has to adjust its language for different consumers – increasing the level of sophistication with a well-educated customer and speaking and plainly with a novice (Parasuraman, 1988).

It involves: explaining the service itself, explaining how much the service will cost, explaining the trade-offs between service and cost, assuring the consumer that a problem will be handled. SERVQUAL has been critiqued on both theoretical and operational grounds according to (Buttle, 1996 & Asubonteng, 1996) for this study, Asubonteng, (1996)'s observation that "Until a better but equally simple model emerges, SERVQUAL will dominate as service quality measure, supports the choice of it".

Applying SERVQUAL in the public sector environment, one needs to be aware of the comments by Gaster (1995) that ***"because of the complex service provision, it is not simply a matter of meeting expressed needs, but of finding out unexpressed needs, setting priorities, allocating resources and publicly justifying and accounting for what has been done"***.

Same applies to observation by (Bryland & Curry, 2001) that service organizations are held responsible and accountable to citizens and communities as well as to customers and service users. These observations suffice the justification to look at the programme environment as obtaining in the public sector.

In the effort to achieve quality and maintain it, there are management approaches used by organizations such as total quality management. It is important for this

study to understand the concept of total quality management because the holistic nature of it encourages and addresses all issues identified in service quality.

2.4.3 Total Quality Management (TQM)

TQM is a business philosophy devised by Deming and has been enthusiastically embraced worldwide. It was fully developed and applied in Japan and assisted Japanese industry to achieve world class standards of quality. Burke (2006: 242) observes that “TQM considers the wider aspects of quality by amalgamating all of the quality management features and TQM has a people and outcome focuses”. There are key aspects that must be in place. Firstly, TQM is seen as the process of transforming an organizational culture from the present reactive mode to a proactive mode, in reducing delays in maintenance and overhaul (Flanagan and Finger, 2003).

Burke (2006: 242) advocates that TQM needs to be introduced to all members and all aspects of the company’s operations. Secondly, TQM is seen as a system to help the firm become more efficient and effective, to respond better to customer needs. Burke (2006: 42) observes the need to keep the customer satisfied. Thirdly, the company wants to see a process improvement tool to enhance its competitive advantage through improved quality, higher productivity and better customer satisfaction, therefore, the company endeavours to implement quality circles, quality audits, quality training, project quality plan which are part of TQM (Burke, 2006).

2.4.3.1 Public enterprise and total quality management

TQM’s popularity emanates from its application in the manufacturing industries and its positive impact on customers’ perception of service in the private sectors. Public sectors embraced the TQM with the perspective. This section of the report looks at the importance of employing TQM to assure quality service in the public sector. It has been argued that, nowadays, the public sector is more a service industry and provides services to end–using citizens (Goh, 1996).

The service provision in the public sector tends to be driven by political leaders. There is a vast difference between the basic conditions of the public sector and the private sector, which can be attributed to the emphasis on resource allocation due to political influence than markets. As a result, authors and commentators argue that public sector possesses characteristics that make them different from private sector. However (Lawton and Rose, 1991) observes that a process of correlation between the public and private sectors is underway and that claims of uniqueness seem to have lost their strength. Therefore, public sector needs to manage its resources just as prudent as the private sector because these resources are equally scarce.

2.4.3.2 Challenges to Implementation of TQM in the public sector

There are challenges to implement TQM in public enterprise such as follows:

- Any product or service offered to a certain kind of end-user is determined politically as a specific and restricted task of certain public organizations;
- That functions of allocating products and services are handled completely or partly by the public organization rather than by the customers;
- Lack of market system price mechanism for Public organization had a negative impact towards the allocation function necessary in public service;
- TQM in public sector denotes to transform 'quality' from a matter of political standards and/or professional standards into quality understood as end-users satisfaction;
- Traditional economic control; political powers, group influences; and organizational cultures.

The challenges above need to be addressed, but the greater challenge is that these challenges, most of it, cannot be resolved without amending the system of the enterprise in question. The organizational structures, and culture of public sector and provincial departments in particular cannot be re-organized overnight and re-organization is a lengthy process itself. There are lessons observed in the application of TQM in the private sector, which lessons, one may argue the importance of the public sector. According to Stevenson (2002), some companies have successful implementation of TQM, while others have failed. Stevenson identifies the following reasons for failure of TQM:

- Lack of a companywide definition of quality, therefore lack of coordinated efforts, in which case, people are addressing different issues, utilizing different measures of success;
- Lack of strategic plan for change and resistance to change;
- Insufficient customer focus, without which, there is a risk of customer dissatisfaction;
- Inadequate intergovernmental communication: frustration, waste, and confusion ensue;
- Insufficient employee empowerment: Gives the impression of not trusting employees to fix problems; adds “red tape”, and delays solutions;
- The view of quality as a “quick fix”: needs to be a long-term, continuing effort; and
- Inadequate leadership for change and utilization of systems approach to management.

Stevenson (2002), observes that the above list can serve as a guideline for the organization to consider in implementing TQM or as checklist for those having trouble implementing it. Below is a Case Study based on Quality Improvements in Local Authority in the United Kingdom (UK):

2.4.3.3 A Case Study: Quality Improvements in Local Authority building services in the United Kingdom (UK)

Table 2.1: A Case Study:–Quality Improvements in Local Authority in the United Kingdom, Adapted from Gerard, C., Susan, M.O. Nigel, P.G. 2003. Property Management. Bradford. Vol. 21, Iss.4

In United Kingdom the service quality improvement in the public sector is top of the agenda, predominantly housing, education and health (Wilkinson, 1999). According to the study by the Glasgow City Council (1998, p. 19), half of its housing estate (dwellings) approximately 47 per cent had condensation or dampness in contrast with 21 per cent of housing association dwellings, and 19 per cent of owner-occupied dwellings. A programme was initiated to address the problems. The programme had established a small focus group consisting of six managers from existing local repair teams each with experience in quality, team management and process development. In the spirit of Total Quality Management, the group invited employees, trade union representatives and members from support services to be involved as necessary. The focus group had to develop a set of specific recommendations for development in relation to operational processes, team working, marketing and supplier customer relationships, and training (Glasgow City Council, 1998).

According to the findings by both Li and Siu (2001) is that 61 per cent of public sector tenants were dissatisfied with the repair and maintenance services provided, and used the Service and Quality (SERVQUAL) measurement tool. The tool assessed the gap between customer's expectations of what they had hoped to receive and their perceptions of what they have actually received by using the five dimensions of quality: Tangibles, Reliability, Responsiveness, Assurance; and Empathy.

2.5 Maintenance Programme

The current state of government properties in Mpumalanga Province is of greatest concern when it comes to repair and preventive maintenance. Government buildings are deteriorating at an alarming speed due to the following:

- Inadequate funding, preventive maintenance;
- Lack of building infrastructure plan, and proper asset register; and
- Non retention of professional staff.

Incontrast

In contrast with the public sector, larger institutions, for example Telkom and Transnet, have performed better than the national and provincial governments with regard to the quality of maintenance. The performance attributed to having in place maintenance systems and processes amongst others. In this section of the literature review, the concepts of maintenance, property maintenance in particular and the process, the framework for application to public sector are discussed. Key elements affecting the implementation of preventive maintenance are also discussed in detail (NIMS, 2006)

2.5.1 The Components of a Maintenance Programme

The Merriam-Webster Dictionary (1997: 445) lists maintenance, as an adjective of maintain; and defines maintain as verb that means "to keep [*something*] in an existing state (as of repair). To keep something in an acceptable state, a system with processes needs to be in place to ensure the state needs. The processes should include audits, appraisals, guidelines regards standards, and level of state. The concept and process, thus apply to building property.

2.5.2 Building Property Maintenance

Applying the concept of maintenance, as discussed above, building property maintenance is the effort to keep the buildings in acceptable existing state. The acceptable state should be to the standards established by the property owner and acceptable to the end user, without which the service quality may not be achieved (DPW Draft Maintenance Policy, 2007). There are two types of maintenance namely: preventive and emergency maintenance.

2.5.2.1 Preventative Maintenance

The National Infrastructure Maintenance Strategy, 2006 (NIMS, 2006) defines preventive maintenance as the **“actions performed to retain an asset in its required condition standard and to prevent failure by providing systematic inspection and monitoring to detect and prevent incipient deterioration or failure and includes testing to confirm correct operation”**. Hauer, J., Bombach, V., Mohr, C., Masse, A. 2000, define preventive maintenance as **“a regular scheduled repair and maintenance needed to keep building components, as an example like-heating-ventilation-air-conditioning and without these practices; a preventive maintenance program may not fulfill its goals”**.

2.5.2.2 Emergency Maintenance

This is the actions performed to retain an asset in its required condition standard and to prevent failure by attending to emergency breakdowns of items with the building property fabric and it is conducted on *ad hoc* basis. Here, response to call for action is important and management of resources for quick response is cardinal. The occurrence of emergencies depends on the quality of the preventive maintenance, meaning that the poorer the preventive maintenance, the higher the call for emergency interventions. In the context of Mpumalanga provincial government, there is, in addition, the backlog that has to be managed. Therefore, the government came up with a backlog maintenance terminology.

2.5.3 Backlog Maintenance

The National Infrastructure Maintenance Strategy, 2006 (NIMS, 2006) defines backlog maintenance as **“Any maintenance that should have been done during the previous maintenance cycles but were deferred, cancelled or not done as a result of a lack of funds or other reasons”**. Hauer, J., Bombach, V., Mohr, C., Masse, A. 2000, identified seven best practices that are necessary for successful preventive maintenance were identified namely:

Inventory building components and assess their conditions, build the capacity for ranking maintenance projects and evaluating their costs, plan strategically for preventive maintenance in the Long- and Short-Term, structure a framework for operating a preventive maintenance program, use tools to optimize the preventive maintenance program, enhance the competence of maintenance workers and managers, involve appropriate maintenance personnel in decision making and in communicating building needs. There is need to understand the seven best practices in detail and identify the key attributes for successful implementation.

2.5.3.1 The Seven (7) Best Practices and Actions for Successful Preventive Maintenance

Table 2.2: [The Seven (7) Best Practices], Adapted from Hauer, J., Bombach, V., Mohr, C., Masse, A. 2000. Preventive Maintenance for Local Government Buildings: A Best Practices Review. Office of the Legislative Auditor, State of Minnesota

<ul style="list-style-type: none"> <p>• Inventory building components and assess their conditions</p> <p>Building managers need to inventory building components before commencing with preventive maintenance. The inventory information aims at identifying the needed maintenance. In order to control costs of assessing conditions, it requires building managers to plan which building components to assess and to establish as to how much to utilize experts with special diagnostic tools.</p> <p>• Build the capacity for ranking maintenance projects and evaluating their costs</p> <p>It is imperative for building managers to use an objective process to set priorities among projects. An evaluating tool like the life cycle costing can be utilized by managers in making cost effective decisions between replacing and continuing to maintain building components. In achieving the reliable costs estimates, officials require to use standardized cost guides, contractor's estimates, or own historical repair data.</p> <p>• Plan Strategically for Preventive Maintenance in the Long- and Short-Term</p> <p>The strategic plan assists building managers to base their plans on the long term and to develop an annual maintenance work plan that encompasses expected projects and to analyse personnel needs. The work plan should list prioritized projects and need to analyse personnel needs.</p> <p>• Structure a Framework for Operating a Preventive Maintenance Program</p> <p>It will be vital for managers to coordinate preventive maintenance with other maintenance projects. Another step is to develop checklists of preventive maintenance tasks and their frequency. For managers there is a need of setting timeline for preventive maintenance activities. By delegating responsibilities for coordination with specific individuals enhances accountability.</p> <p>• Use Tools to Optimize the Preventive Maintenance Program</p> <p>It is vital for building managers to gain optimum benefits from preventive maintenance, incorporate preventive</p>
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maintenance tasks into a work-order system and keep systematic maintenance records, either by computer or manually. For managers to gauge how well a program is performing, they should periodically evaluate preventative maintenance program.

- **Enhance the Competence of Maintenance Workers and Managers**

The Local jurisdictions need to ensure that maintenance employees receive training to competently complete their tasks. For competency purpose, Managers should be considered for managerial training in order to enhance their hands-on maintenance skills. Safety at the workplace is of great importance as the Occupational Safety and Health Administration (OSHA) prescript requires safety-related training to detect the hazardous chemicals and measures the workers can take to protect themselves from the hazards

- **Involve Appropriate Maintenance Personnel in Decision Making and in Communicating Building Needs**

It is wise for the maintenance personnel to be engaged in early stage when decision is to be taken with regard to the procurement of major components or designing space. By doing so it helps to avert unnecessary costs as the design makes future maintenance needs explicit. The educational strategy needs to be developed by the managers to inform various audiences about building conditions, required maintenance, and the consequences of deferring projects.

2.5.4 The Strategic Objectives of the Maintenance Programme

In addition to elements identified in the best practices listed above, and according to Brogowicz *et al.*, 1990, management models for preventive maintenance need to identify and try to relate key elements that require systematic attention as follows: managements' perceptions of customer expectations and managements' perceptions about the service; selection, training and adequate level of autonomy, power and rewards to personnel; and key performance indicators for maintenance, for example, the building age.

2.5.4.1 Management's perceptions of customer expectations and Management's perceptions about the service:

Key elements that Brogowicz *et al.*, 1990, identified that managers and personnel should pay attention to are:

- Vision, mission, service strategy and directions to eliminate the gaps;
- Service analysis, translation of perceptions into service quality specifications and service design;
- Financial and human resource management;

- External communication and;
- Service delivery system (production, delivery and 'part-time marketing).

2.5.4.2 Selection, training and adequate level of autonomy, power and rewards to personnel

Human Resource Management (HRM) plays an important role in management that involves selection, training, setting standards/ objectives in accessing individual performance, assisting people where help is required, and lastly to reward them for achievements. There is a need for selecting right people and to recruit quickly, accepting candidates with inadequate attitudes, values and skills should be avoided (Zemke & Schaaf, 1989).

2.5.4.3 Key performance indicators for Maintenance Building Age

According to Neely & Neathamer (1991); Atkin & Brooks (2000) there are previous studies that noted that the Performance of maintenance could be influenced by various factors, like the age of building, labour sources, and the type of building. McDougall & Hinks (2003) say that there is a need of developing models that will integrate building performance into asset management and into budgeting of management and maintenance activities.

The author agrees that building age is key element that should be considered in planning the maintenance or replacing the building. Building age is actually examined by means of an analysis of the annual maintenance costs according to the life cycle of building components (Building Services Component, 2002). The annual expenditure is determined by using the predicted costs for ongoing maintenance of various components of the building and for the replacement of components at the end of their life cycle (Jashpara, 2000).

2.6 In the Eye of the Government: the Status of Strategic Planning for Maintenance in Public Sector.

Maintenance in the public sector, although much needed, faces a lot of challenges. The section identifies from the literature the obstacles in implementation of maintenance programmes and key developments that the South

African government in general and Mpumalanga provincial government in particular, have put in place.

2.6.1 Obstacles Limiting Preventive Maintenance in Public Sector

The key obstacles identified include: inadequate funding for building maintenance, insufficient skilled staff, the state-imposed levy limits, funding restrictions that dissuade spending on preventive maintenance, and increased maintenance needs due to new construction (Minnesota Office of the Legislative Auditor, 2000).

2.6.2 Interventions: Policy Framework, Guidelines and others

Despite the numerous challenges cited above, the policy framework for maintenance works in public sector in South Africa is well developed and strategies are also available. Inadequate funding for maintenance remains a major challenge. Looking at the policy framework, the following documents are in place and are important for planning and implementation of the maintenance programmes. Tables 2.3 below shows all programmes and project activities are informed by the following legislative and statutory prescripts and process guidelines:

Table 2.3: Policy Framework for the Maintenance Programmes, Adapted from Department for Public Service Administration (DPSA) website.

- The Constitution of the Republic of South Africa;
- Public Finance Management Act (PFMA);
- Government Immovable Asset Act (GIAMA);
- The intergovernmental Relations Framework Act 13 of 2005, as amended;
- Provincial Maintenance Policy;
- Service Level Agreement (SLA) as signed by the Department of Public Works and Client Departments;
- National Building Regulations;
- The Occupational Health and Safety Act 85 of 1993, as amended;
- The National Environmental Management Act 107 of 1998, as amended;
- National Heritage Resources Act 25 of 1999, as amended.

2.6.3 Interventions: Funding for Maintenance

Through Repair and Maintenance Programme (RAMP, 2000), the national government initiated and implemented initiatives in addressing the backlog on maintenance of the used and owned government properties. The programme required R1 billion per annum over ten years to clear the maintenance backlog under the National Department of Public Works (RAMP, 2000).

The Department solicited private companies from the construction and related industries to tender for the upgrading and maintenance projects for specific buildings. For example, RAMP programme was implemented in eight prisons at an amount of R127 million. The RAMP applied at the National level and without any replication to the Provincial level. At provincial level, Mpumalanga province through the Department of Public Works need to put aside R290 Million for the maintenance of government properties.

2.6.4 The Interventions: Facilities Management as Turnaround Strategy

The Minister for National Public Works introduced facilities management as part of the mission to eradicate maintenance-related problems, for example, Union Buildings and Magistrates' court in Pretoria, the Parliamentary Complex and the Police Headquarters in Cape Town had facilities management approach introduced in partnership with private sector based companies (RAMP, 2000). The key aim in this arrangement is that management risk was transferred to the private sector.

The Mpumalanga Provincial Government, through the Department of Public Works engaged the Council for Scientific and Industrial Research (CSIR) to investigate and report on the turnaround strategy. The strategy is being considered for implementation in the 2010/2011 financial year. The strategies are being implemented with an understanding that infrastructure maintenance is a strategic tool to enhance service delivery, unlocking funds to extend infrastructure to historically disadvantaged communities and support the economy (Wessels, 2008).

2.6.5 A Strategy for Facilities Management

Van Baalen & De Coning (2006) observe that “**programme management has proven to be vital ingredient and an interface between policy development, planning and project management**”. Strategies for competitiveness, just like in corporate business such as customer responsiveness and the continual improvement of quality have also placed high demand on revisiting all processes and need to restructuring of the business; these should fit into the programme management structure.

In addition, there is need to: recruit and retain skilled personnel, implement systems for coordinating diverse activities and make programmes to be successful. The promotion of outsourcing provides more effective relationships to the mutual benefit of clients, providers, and users. The resources in private sector such as human resources, for example facilities managers are brought into the public sector through partnerships. Facilities management is gaining recognition in the economy, especially with the introduction of competition and choice in delivering public services; it has opened opportunities for joint ventures with private enterprise.

2.6.6. The Intervention: Strategic Property Management

Strategic property management involves findings weaknesses related to property and the management process with the view towards eliminating such weaknesses and improving management of the property within the organization. The four themes are elaborated in Table 2.4 below, namely:

Table 2.4: Themes in Strategic Property Management, Adapted from Draft Policy for Immovable Asset Preservation of Public Works Buildings and Related Services in Mpumalanga 2007/08

- **Reactive management:** in this case, operational property assets are often managed in reactive manner and operational managers normally perform the work on an *ad hoc* basis with limited knowledge on how the “improvement” will affect the value of the property. The requirements of the property like an impending rent review of leaking roof which may have the driving force behind the establishment of properties. Managers are less concerned with the long term planning operational property.
- **Landlord versus tenant objectives:** There is no clear distinction between the objectives of a landlord and those of a tenant. Landlord’s role is to enhance the value of the asset while the tenant is concerned with minimizing the cost of occupancy and obligation. Clarification is often not addressed by the

organization or guidance from the senior management team.

- **Lack of performance monitoring:** Lack of overt property objectives led to little monitoring of the performance of property or its management. Lack of awareness of the opportunity cost of property. Operational managers were not charged for the property they occupied. Cost or performance of the operations was unknown because property was effectively a free resource. No incentives given to managers to use the space effectively. Property used to subsidize the operation but the level of subsidy was not quantified.
- **Inadequate information:** Unavailable information to make informed decision. Most organization had a basic property register or inventory, and often incomplete and inaccessible. It is sometimes complicated to integrate operational with property information. The lack of information may create effective property management impossible.
- **Perceptions of Property Users and Managers:** The property users or tenants perceive property as a resource that is free, inflexible and static. They often feel that they understand property because they have understood property because they have bought and sold their own homes.

2.6.6.1 Key Aspects of Property

Property, in this study, is a building that needs to be maintained, a lease that needs to be renewed, accommodation that needs refurbishing, and a tax liability which needs to be minimized. There are three different aspects through which the property can be examined, namely: physical asset, financial asset, and as a place within which some organizational activity takes place as tabulated below.

Table 2.5: Three different Aspects of Property, Adapted from the DPW Lease Agreement, 2006/07.

- **Physical Asset:** is a building that needs to be maintained;
- **Financial Asset:** a lease that needs to be renewed and a tax liability which needs to be minimized;
- **Organizational asset:** accommodation that needs refurbishing; or a place within which some organizational activity takes place.

From the themes and the aspects of property, one sees that managing property, in a proactive manner, is a long term planning requirement. It normally takes five (5) to ten (10) years while in the public sector to the political cycle is four (4) or five (5) years, which is a longest planning horizon for local authorities, but is short or medium term for planning property management sector. There is a conflict because an organization, it makes business for an organization to consider its

property requirements over a longer period, for example five (5) to ten (10) year period, if it has to take full advantage of property market opportunities.

2.6.6.2 Strategic Framework for Property Management in Mpumalanga Province

According to the Mpumalanga Provincial Government Strategic Framework report (2008) the property management should form part of strategic planning process by ensuring that the operational property is well managed. In addition, the property should be actively managed in order to meet the future needs of the organization.

The strategic plan implores managers to set specific targets and with measurable performance indicators established; it also demand for the monitoring and control measures. It is vital to have appropriate management information that combines operational information with property information and system managed during the implementation phase. Key elements in this regard are: information, evaluation and consulting services and management of these elements thereof, as elaborated in the table below.

Table 2.6: Key Element in the Strategic Framework for Property Management in Mpumalanga Province, Adapted from the DPW Strategic Performance Management report, 2008

- **Information:** It is vital for managers to have the quality and quantity of property information available to be utilized at the strategic level and should be in a form of a summary of the detailed information held on each property. Senior managers need to be aware of how detailed information has been defined in order to interpret the resulting strategic measures.
- **Evaluation:** It is vital for senior managers to take in charge of the performance of the organization. They need to ensure that all resources are being managed in an efficient and effective manner. For them to execute this, it needs to be measured and act as indicators of good and bad performance. As these property measures are not well developed, not only are there no standards indicators, but also there are limited data available externally that will assist an organization to establish benchmarks. If a strategic approach has to be adopted, there is a need to set actionable measures in order to point the senior management team in the appropriate direction.
- **Facilities Management Consulting Services:** In essence it provides training programmes on purchasing and control of building related expenses; Provision of training programmes on negotiating with suppliers and developing and managing service level agreements; Mentoring programmes to help your in-house managers perform their duties more effectively; Identifying outsourcing opportunities to Black Economic Empowerment (BEE) companies.

- **Batho Pele Principles:** Is the initiative that aims to enhance the quality and accessibility of government services by improving efficiency and accountability to the recipients of public goods and services.

2.6.6.3 The Stakeholders and their roles in Maintenance Programme

The maintenance programme is carried out using a project management approach; currently only emergence maintenance is being implemented and Council for Scientific and Industrial Research (CSIR) is compiling the data on the backlog and developing a master plan for the implementation of the preventive maintenance. Burke (2005) observed that projects are not carried out in the vacuum and are also influenced by stakeholders and other issues. In this study, the stakeholders in the maintenance of residential stock under the DPW are listed in table below.

Table 2.7: Stakeholders in the Maintenance Programme in Mpumalanga Province, Source: Compiled by Author (2009).

- **National Department of Public Works:** through parliament, cabinet and other forums direct the policy framework.
- **Provincial treasury:** custodian of funding and manages the dispensary of the funds for maintenance activities.
- **Other Provincial departments:** owners and also end-users of the building infrastructure, hence these are institutional customers as well as pool from which individual tenants come from.
- **Professional service providers:** architects, engineers provides the necessary technical and management advice to the programme.
- **Service provider-contractors:** includes CIDB registered contractors and those who render services on open market. These provide services in terms of repair and renovations and other maintenance works.
- **Service providers-suppliers:** some not directly linked with the DPW, but suppliers of materials and other accessories render that service to the department as well as to the contractors and consultants engaged by the department.
- **Tenants:** covers both institutional and individual tenants that occupy the buildings that are managed by DPW.

2.7 Conclusion

The environment under which the maintenance programme is implemented faces many challenges: Operation Department has no systems in place, funding is inadequate and has few positions that are filled. Currently, the Mpumalanga Provincial Government has not approved the maintenance policy, which is still a

draft. However, the maintenance policy, although in its draft status, is aligned with the National maintenance policy.

Many government properties in Mpumalanga Province are dilapidated and require maintenance. The maintenance programme, in this case, includes preventive, emergence and the much awaited maintenance of buildings on the backlog list.

There are seven identified best practices: inventory building components and assess their conditions, build the capacity for ranking maintenance projects and evaluating their costs, plan strategically for preventive maintenance in the long- and short-term, structure a framework for operating a preventive maintenance program, use tools to optimize the preventive maintenance program, enhance the competence of maintenance workers and managers, involve appropriate maintenance personnel in decision making and in communicating building needs.

First, the managers and personnel should pay attention to the vision, mission, service strategy and directions to eliminate the gaps; service analysis, translation of perceptions into service quality specifications and service design; financial and human resource management; external communication; service delivery system (production, delivery and 'part-time marketing).

Second, the managers should pay attention to selection, training and adequate level of autonomy, power and rewards to personnel.

Third, building age is key element that should be considered in planning the maintenance or replacing the building. There are obstacles limiting preventive maintenance in public sector such as inadequate funding for building maintenance, insufficient skilled staff, the state-imposed levy limits, funding restrictions that dissuade spending on preventive maintenance, and increased maintenance needs due to new construction.

The policy framework for maintenance works in public sector in South Africa is well developed and strategies are also available. The government starting at national

level has put in place intervention such as: making available funds for maintenance programmes, adopting facility management and strategic property management as the turnaround strategies.

DPW has put these strategies in the strategic plan. DPW identifies itself with other stakeholders to ensure effective planning of the maintenance works. In all its effort, DPW wants to deliver quality service attained through service quality tenets. The tenets of service quality are outlined in the concept of gaps (1-7).

In summary, Gap 1: Customer's expectations versus management perceptions, Gap 2: Management perception versus service specifications, Gap 3: Service specifications versus service delivery, Gap 4: Service delivery versus external communication, Gap 5: The discrepancy between customer expectations and their perceptions of the service delivered, Gap 6: The discrepancy between customer expectations and employees' perceptions, Gap 7: The discrepancy between employee's perceptions and management perceptions.

These gaps are cardinal to this study and forms key framework for the evaluation of maintenance programme in Mpumalanga. Quality is also attainable using the Total Quality Management (TQM) model. TQM is seen as the process of transforming an organizational culture from the present reactive mode to a proactive mode, in reducing delays in maintenance and overhaul.

Chapter 3 outlines the research methodology employed for the research, will review on the existing literature, type of instrument used, questionnaire data collection, data analysis.

CHAPTER THREE

Research Methodology

3.1 Introduction

According to Huysmans (1993: 26) the survey method is generally used when the researcher wishes to elicit opinions. Therefore the research is not a survey, but detailed study to evaluate the maintenance of government properties in Mpumalanga Province from a service quality perspective. As a sensitive project, participants will have to voice their opinions without being recognized. The purpose of this research was to test whether the tenants receive the best service quality from the DPW officials.

The task of literature review was to have a sense of the investigation carried out by the researcher in order to achieve the objectives outlined in Chapter One of this research. This section of the report presents a review of the literature that informed the approach taken in the research process and also presents the limitation and validity testing of the findings.

The research is quantitative in nature and uses statistical techniques to analyze the data gathered from the administration of questionnaires. This section reports on the process of setting up this study and highlights key aspects taken into consideration to make the results of this study not only valid, but reliable, representative and ethical.

3.2 Objectives of the Study

Based on the objectives of the study as outlined in Chapter One, the research secondary objectives were:

- 3.2.1 evaluate the customer's perceptions about the physical condition of the properties being rented and occupied.
- 3.2.2 evaluate the customer's perceptions about the DPW's ability to perform its promised services dependably and reliably.
- 3.2.3 evaluate customer's perceptions about DPW's willingness to help tenants and provide a prompt service.
- 3.2.4 evaluate the customer's perceptions about DPW's knowledge and courtesy.
- 3.2.5 evaluate customer's perceptions about the caring and individualized attention that DPW provides to its customers.
- 3.2.6 make recommendations to DPW that will assist in developing strategies to improve its service quality.

3.3 Sampling Techniques and Description of the Sample

Babbie & Mouton (2004: 173) define population as "the theoretically specified aggregation of study elements". Parahoo (1997: 218) describes a study population as the total number of units from which data can potentially be collected. The units may be individuals, organizations, events or artefacts. In this study, the target population for this research will focus on both the DPW officials and the tenants residing at Ehlanzeni District in Mpumalanga Province. It is advisable to use as large a sample as possible.

In other words; the large samples normally maximise the possibility that the means, and other statistics become a true estimates of the population. This will be done by approaching informants in a simple random sample. The said procedure will be conducted irrespective of gender, age, language, and colour and surveys will also be conducted focusing on both the DPW tenants and officials. The data collected will add value towards the hypothesis test in the research methodology.

The total number of questionnaire forms disseminated was ninety two (92). Of the ninety two, sixty five (65) questionnaire (Appendix: E, F, G) forms were disseminated by hand to tenants. From the total of 65 sets of questionnaire forms,

sixty (60) sets of questionnaire were completed, only five (5) were unreturned and indicating the feedback rate of 92.31% (Total of about 120 tenants).

Twenty seven (27) questionnaires (Appendix: H, I, J) were disseminated by hand to DPW officials. From the total of 27 questionnaires, 27 questionnaires were completed and returned, indicating the feedback rate of 100% (Total of about 50 DPW officials). The purpose of the grouping and stratifying randomly is 'to guarantee that each group is represented in the sample' (Lind, Marchal & Wathen, 2005: 254). The sample size of ninety two (92) will suffice the sample size which is critical, and hence provide a basis for the estimation of sampling error (Hair, Anderson, Tatham & Black, 1995).

3.4 The Research Instrument

Welman & Kruger (2002) define research design as the plan according to which we obtain research participants (subjects) and collect data from them. Babbie & Mouton (2004: 74) define a research design as ***“a plan or blueprint of how the researcher intends conducting the research”***. Being a blue print, the research plan includes guidelines and procedures. Therefore, below are the guidelines and procedures. The guidelines talks to the ethical considerations, while the procedures talks to the methods.

3.4.1 Description and Purpose

Both (Saunders *et al*; Cooper & Schindler, 2006) agree that the questionnaire could be utilized for exploratory, descriptive and explanatory study. The researcher employed a mixed approach method with a varying degree of quantitative, exploratory, descriptive and explanatory design for this study. As a result, questionnaire was utilized to conduct the research. The reasons for choosing these methods are advanced in the discussion as indicated in the table below.

Table 3.1: Key Elements of the Research method and Approach, Adapted from Burns & Grove (1999), Leedy & Ormrod (2005); Blumberg, Cooper & Schindler (2005).

- **Quantitative Method:** This research project is based on a quantitative analytic nature, entailing a research methodology based on sampling techniques, fieldwork, questionnaires, application of an appropriate form of statistical quantification, such as analytical program like the statistical package of Social Science (SPSS, V 12.0) was employed, and the interpretation of the results in terms of parameters of significance projected by SPSS. The service quality score was calculated for each dimension of the respondents' knowledge and perceptions by using the Microsoft Excel to calculate the mean value in relation to the 19-20 questions (refer to Table 1.3 and 1.6). The approach is selected to evaluate the threads that articulate on a particular aspect of behavior, which enables the quantification of behavior, in some way (Leedy & Ormrod, 2005). Blumberg, Cooper & Schindler (2005) noted that quantitative studies rely on quantitative (i.e. numbers and figures) and follow to test the validity of propositions formulated in previous qualitative studies, such as the SERVQUAL. In this study, the researcher adopted a quantitative approach to gain insight into the respondents' perception about the maintenance on government properties in Mpumalanga Province from a service quality perspective.
- **Explorative Approach:** According to Babbie & Mouton (2004: 79) the exploratory research examines a new interest or relatively new topic of study. The exploratory study seeks for new knowledge, new insights, new understanding, and new meaning. This study will explore the existence of customer perceptions and evaluate extent of the customers' perception about the maintenance on government properties in Mpumalanga Province from a service quality perspective.
- **Descriptive Approach:** Descriptive intends to gain more information about the characteristics of a particular field of study. Such approach can be used for various purposes like providing a picture of a situation as it naturally happens, to develop theory, to identify problems in order to justify current practice, and to determine what others in similar situations are doing (Burns & Grove 1999:92). The researcher used this design to describe the research objectives earlier in the report.

3.4.1.1 Construction of the Instrument

According to Curwin & Slater (2006: 58), a questionnaire need both logical structure and well thought questions to ensure a clear flow from question to question. The author above also observed that the questionnaire needs to be piloted before final release. The language must be known accepted and understood by the participants. These key aspects are incorporated in the

questionnaires. First, questionnaire schedules were determined, as tabulated below, and questions were developed according to the schedule with effort towards ensuring logical structure. A trial version was also administered.

The researcher needs to set the questions according to the objective. The questionnaire surveys were divided into 3 key sections: first section indicated the (general information) for both tenants and DPW officials; the second one was the interview schedule (physical property) also for both tenants and DPW officials and the third one was the questionnaire forms prepared for both tenants and DPW officials. The above mentioned sections are obtainable from Appendix A-J. The section contained 20 questions for tenants to respond to, about the service quality offered by DPW and 19 questions were meant for DPW officials. The participants were requested to rate their expected level based on a 5 point Likert scale whereby; Strongly-Disagree-Disagree-Neutral-Agree-Strongly Agree was employed in order to record the perception of the service quality.

It is vital that the measuring instruments utilised ensure measurement of reliability and validity. The most authentic measuring instruments are survey questionnaires. SPSS is employed as a statistical software program, which provides the statistical tools for data exploration and data description in the research (Lind, Marchal & Wathen, 2005). It included the following:

Demographic data sheet (age, income, occupation, education, family size, gender etc).

The evaluation of customer's perceptions about the physical condition of the properties being rented and occupied. In this section, the questionnaire format is discussed; the template is attached in (Appendix A-J). The respondents were allowed to anonymously answer the questionnaires without fear of retribution from both DPW officials and other tenants. At the outset the respondents were informed that this is an anonymous survey and that their responses remain confidential.

There is a need of empowering respondents with this information. The researcher further informed the respondents that participation in the survey is voluntary, but

that their assistance through their participation will be valuable and much needed. The following is a detailed breakdown of the types of questions that will be posed to respondents in the survey:

Table 3.2: Categorization of Questions, Adapted by the author (2009).

<p>Questions 1- 5: focused on demographic information regarding the age, gender, marital status, grade, and qualifications of the respondents;</p> <p>Question 6: focused on how long have the respondents been employed.</p> <p>Question 7: focused on respondents' organizational function and responsibilities.</p>

3.4.2 Pre-testing and Validation

Both the tenants' and DPW officials' questionnaire gauged the attitudes or reactions of the tenants. It aimed at checking whether the tenants Strongly-Agree – Agree – Neutral - Disagree or Strongly Disagree. Creswell (2003) observed that it is important to inform readers of the report the types of statistical analysis that will be used. In this case, the means, standard deviations and ranges are computed and analysis deduced from these descriptive statistics.

For purpose of inferential statistical test, the t test and the uni-variate analysis of variance (ANOVA) are used because the study has categorical information (groups) that are independent variables and continuous information on the dependent variables (Creswell, 2003:p173)

3.4.3 Administration of the Questionnaire

Data was collected by means of in-depth, individual phenomenological interviews and observations in the form of field notes. The data gathered from the two (2) different sets of questionnaires; whereby one is to know the customers' perception on the service they receive and the other one is to know the DPW's officials whether they perform the promised service to the clients. Thereafter the questionnaires were analysed, and then integrated with the existing literature, to provide explanations for the findings. From this approach, the conclusion at the end of the report is drawn with recommendations to DPW to develop strategies to improve its service quality.

3.4.3.1 Tenant Interview Schedule (Physical Properties)

The interview and question schedule for tenants is presented in table 3.3 below.

Table 3.3: Detailed Categorization of Questions, Adapted by author (2009).

<p>Question 1: respondents are asked on the type of the properties they occupy or rent.</p> <p>Question 2: focused on the property's appearance.</p> <p>Question 3: respondents are asked for how long have they occupied the property.</p> <p>Question 4: related to the service quality standards.</p> <p>Question 5: focused on the reliability of service rendered to the clients.</p> <p>Question 6: related on DPW's ability to performance the promised service to the tenants.</p> <p>Question 7: asked respondents on the duration the DPW take to respond to the complaints lodged.</p> <p>Question 8: related to DPW as responsible for the maintenance of properties.</p> <p>Question 9: focused on DPW's treatment of individual's needs.</p> <p>Question 10: focused on the competency of artisans.</p> <p>Question 11: related to the safety of the property the tenants are occupying or renting.</p> <p>Question 12: related to the accessibility in the property.</p> <p>Question 13: focused on the politeness of the property staff.</p> <p>Question 14: focused on the frequency of maintenance to the properties</p>
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The tenants' questionnaire gauged the attitudes or reactions of the tenants. It aimed at checking whether the tenants strongly agree – Agree – Neutral- Disagree or Strongly Disagree as applied on a five point Likert scale. The above model is normally used in various institutions. Each tenant had to declare whether he/she is in agreement or disagreement or not sure with the item refer to Table 1.3.

3.4.3.2 Interview Schedule for DPW officials (Physical Properties)

The researcher interviewed the DPW officials based on the types of the following questions; refer to Table 3.4.

Table 3.4: Detailed Categorization of Questions, Adapted by author (2009).

<p>Question 1: focused on respondents' perception with regard to the properties they are occupying.</p> <p>Question 2: related to the types of properties DPW have.</p> <p>Question 3: related to the promise DPW suppose to keep.</p> <p>Question 4: related to the survey system in place.</p> <p>Question 5: asked the duration DPW take to respond to the customer's complaint.</p> <p>Question 6: asked the responsible personnel on maintenance of government properties.</p> <p>Question 7: related to the frequency of treatment by DPW to the tenants.</p> <p>Question 8: focused on the competency of the artisan on property maintenance.</p> <p>Question 9: asked about the accessibility to properties.</p> <p>Question 10: related to security of the properties.</p>

Question 11: focused on the knowledge management with regard to the maintenance backlog.
Question 12: stated the communication effectiveness about the range of properties offered to tenants.
Question 13: related to barriers on quality service.

The DPW officials' questionnaire aimed to gauge the official's attitude with regard to the conditions of properties they provide to their customers. It further investigated promptness in responding to the customer's complaints or requests to their customers (as tenants). In addition, the understanding on the customers' needs pertaining to maintenance on regular basis refers to Table 1.6. They required indicating whether they strongly Agree-Agree-Undecided-Disagree or Strongly Disagree.

3.4.3.3 Instrumentation and Variables in the Study

Creswell (2003) noted that variables in the research are articulated in the proposal stage, however, he suggests that variables and research questions should be aligned to demonstrate how these are linked and used in the analysis. Below is the table compiled to outline the linkages.

Table 3.5: Detailed Categorization of Questions and Variables, Adapted by author (2009).

Variable Name	Research Question	Item on Survey
Independent Variable # Quality	What is the concept of quality?	Question 10: focused on the competency of artisans. Question 11: related to the safety of the property the tenants are occupying or renting.
	What are the processes and how is quality measured or what quality standards as applied to maintenance?	Question 4: related to the service quality standards.
	What is relationship to the concept of service quality?	Question 8: related to DPW as responsible for the maintenance of properties. Question 13-O: related to barriers on quality service.
Independent Variable # Maintenance	What is the concept of maintenance and what are the types of maintenance, the processes and the techniques	Question 10: focused on the competency of artisans. Question 11: related to the safety of the property the tenants are

		occupying or renting.
	How are these influenced in the relationship with conditions of the properties and the quality envisaged by end user versus the quality envisaged by the property owner;	Question 4: related to the service quality standards. Question 8: related to DPW as responsible for the maintenance of properties.
Dependent Variable-1 # Maintenance programme	What is the status of the maintenance programme in Mpumalanga Department of Public Works based on the tenets of service quality?	Question 1: respondents are asked on the type of the properties they occupy or rent. Question 5: focused on the reliability of service rendered to the clients. Question 14: focused on the frequency of maintenance to the properties. Question 2-O: related to the types of properties DPW have.
Dependent Variable-2 # customer's perceptions (physical condition of the properties)	What are the customer's perceptions about the physical condition of the properties being rented and occupied?	Question 2: focused on the property's appearance. Question 12: related to the accessibility in the property.
Dependent Variable-3 # customer's perceptions (DPW's ability to perform)	What are the customer's perceptions about the DPW's ability to perform its promised services dependably and reliably?	Question 7: focused on respondents' organizational function and responsibilities. Question 6: related on DPW's ability to performance the promised service to the tenants.
Dependent Variable-4 # customer's perceptions (DPW's willingness to help tenants)	What are the customer's perceptions about DPW's willingness to help tenants and provide a prompt service?	Question 7: asked respondents on the duration the DPW take to respond to the complaints lodged. Question 9: focused on DPW's treatment of individual's needs. Question 13: focused on the politeness of the property staff.
Dependent Variable-5 # customer's perceptions (DPW's knowledge and courtesy)	What are the customer's perceptions about DPW's knowledge and courtesy?	Question 10: focused on the competency of artisans. Question 11: related to the safety of the property the tenants are occupying or renting. Question 11-O: focused on the knowledge management with regard to the maintenance backlog. Question 12-O: stated the

		communication effectiveness about the range of properties offered to tenants.
Dependent Variable-6 # customer's perceptions (caring that DPW provides to its customers)	What are the customer's perceptions about the caring and individualized attention that DPW provides to its customers?	Question 3: respondents are asked for how long have they occupied the property. Question 9: focused on DPW's treatment of individual's needs.
Control Variable 1 # Age,	What is your age For how many years have you been employed?	Questions 1- 5: focused on demographic information regarding the age, gender, marital status, grade, and qualifications of the respondents; Question 6: focused on how long have the respondents been employed.
Control Variable 2 # Gender,	How are tenants distribution by age group	Question 1-T: What is your Gender group?
Control Variable 3 # Marital Status	How are tenants distribution by Marital Status	Question 2-T: What is your marital status:
Control Variable 4 #grade, and qualifications	How are tenants distribution by grade, and qualifications	Question 3-T: How many years of formal education do you have beyond secondary/high school? What is your highest academic' professional qualification?

3.5 Statistical Analysis of the Data

The section presents the result of the field work conducted during the interviews with relevant participants using the questionnaires in (Table 1.1; 1.2; 1.3; 1.4; 1.5 and 1.6). The presentation outlines the demographic characteristics of the participants who were involved during the research.

Conclusion

In this chapter the researcher presented the sampling techniques and description of the sample, research instrument, purpose, pre testing and validation, participants' questionnaire schedule and to assess the DPW service performance from the tenants' perspective.

Chapter 4 will present the results obtained from the participants to demonstrate findings about service quality on maintenance of government properties.

CHAPTER FOUR

Presentation of Results

4.1 Introduction

This chapter presents the analysis and the results of the research derived from the data gathered from two perspectives (i.e. both tenants and DPW officials respectively). The questionnaires acquired through the questionnaire survey form will then be analysed using quantitative approach. The purpose of this study is to evaluate the maintenance on government properties in relation to the service quality perspective.

4.1.1 Respondents' Characteristics

The researcher will also give an account of the findings and demonstrate findings through the use of graphs and tables. The presentation is an analysis of results and to answer the research questions.

Below is the graphical presentation on age group (**code: b1**)

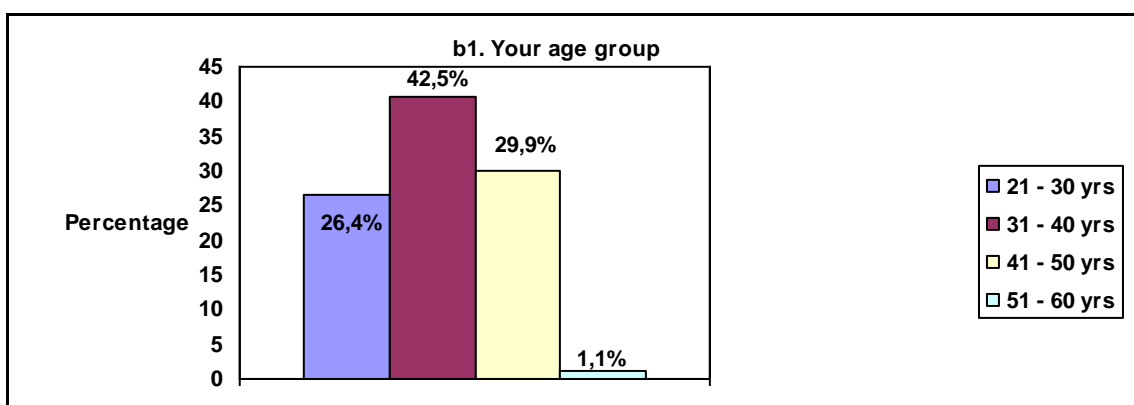


Figure 4.1: Graphical representation according to age group

The respondent's ages were ranging between 21 years and above 51 years old. The figure reveals distribution as follows: 26.4 % (23) respondents range between

21 - 30 years, 42.5 % (37) respondents range between the ages of 31 - 40 years, 29.9 % (26) between 41 - 50 years and 1.1 % (1) are above 51 years in this research project. The distribution shows that the highest population of tenants is those in the Age group 31-40 years followed by 41-50 years and lowest are the 21-30 age group. The success of the maintenance programme depends; therefore, on the satisfaction of the needs of the dominant age group and follow in the order (First, 31-40 years followed by 41-50 years and lowest are the 21-30 age group).

Below is the figure representing the gender group (**code: b2**)

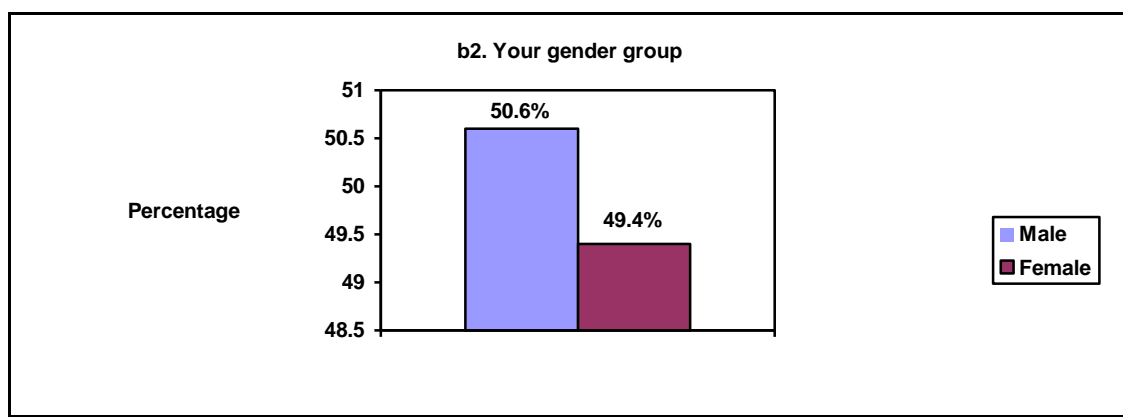


Figure 4.2: Graphical representation according to gender group

Figure 4.2 above reveals the demographic characteristics of those respondents participated in the research and the results also reveal different gender groups with a distribution of 50.6% (44) males, and 49.4 % (43) were females. The gender is used as one of the variables in the research to determine whether there is a difference in perception between males and females, about the physical condition of the properties provided to tenants by the DPW.

The distribution shows that the highest population of tenants is male group followed by the female group. However, the difference in the distribution is minimal meaning that the success of the maintenance programme depends; therefore, on the satisfaction of the needs both groups.

Below is the figure presenting the marital status (**code: b3**)

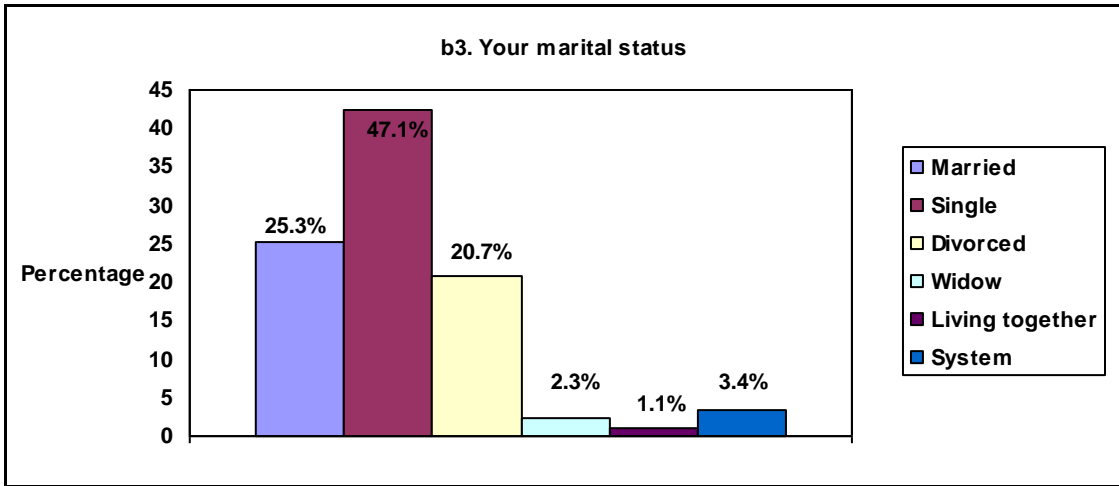


Figure 4.3: Graphical representation according to Marital Status

Above is the figure that shows the distribution according to marital status of the respondents in this research, almost 25.3% (22) of the respondents are married, almost 47.1% (41) were single respondents. Almost 20.7% (18) respondents have divorced. Respondents' widows were 2.3% (2) and the least respondents living together were almost 1.1% and 3.4% (3) of the respondents have not responded accordingly and will not be considered for the purpose of the research. The highest numbers of 47.1% (41) are single respondents, followed by 25.3% (22) of the respondents that are married and 20.7% (18) respondents have divorced.

The status of tenants also determines the property usage, for example, single persons may sublet the property which may lead to over populating the estate.

Below is the figure representing the formal education beyond secondary high school (**code: b4**)

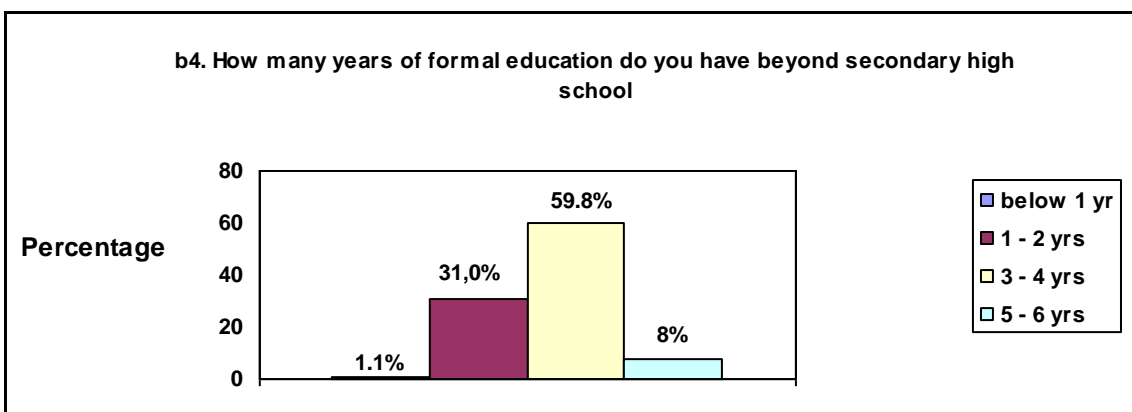


Figure 4.4: Graphical representation according to Formal Education

The figure's results above reveal different levels of formal education beyond secondary school in this project, almost 1,1% below 1 year, over 31% respondents were between the range of 1-2 years formal education beyond secondary school, and 59,8% respondents between 3-4 years, and 8% of the respondents were between 5-6 years. The majority of the respondents at 59.8% have the formal education beyond secondary school, meaning that the majority can afford the charge levied for the service of maintenance as they are gainfully employed. Same applies to those within the 1-2 years range. This also means that awareness documents for the tenants under the maintenance programme can be in one or two languages as most of the tenants can be considered literate.

Below is the figure presenting the highest academic professional qualification (code: b5)

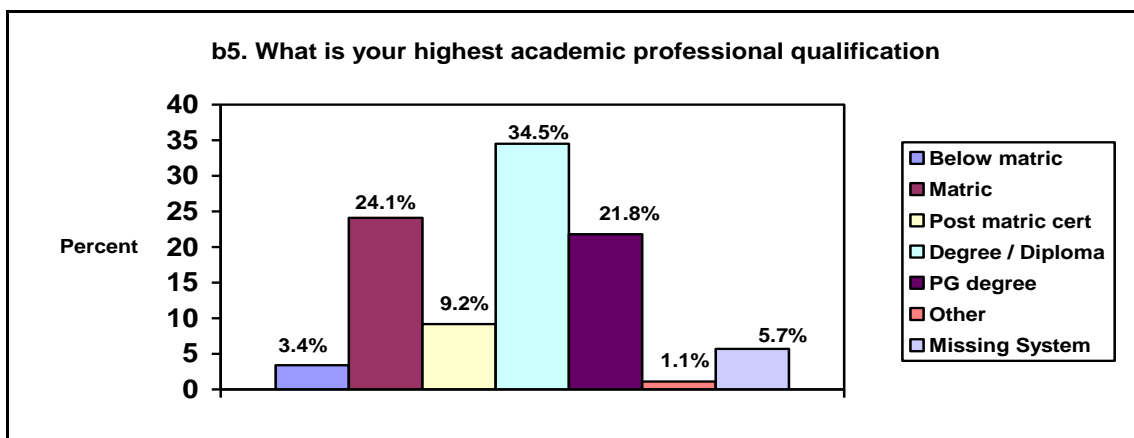


Figure 4.5: Graphical representation according to highest academic professional qualification

The above-mentioned figure indicates the different academic professional qualifications of the tenants. Almost 3, 4% (3) are below Matric, 24, 1% of the respondents have Matric, almost 9, 2% (8) of the respondents have Post Matric Certificate. The majority of respondents in this project have Degree/Diploma were at 34, 5% (30), Over 21.8% (19) respondents have PG Degree, less than 1.1% (1) respondents have other related qualifications, and 5,7% (5) did not respond to the statement and may not be considered for this research.

The majority of respondents with Degrees/ Diplomas were at 34.5% which

signifies that respondents who occupied the government houses were employed and could afford to pay for their services. The least respondents at 3.4% were below the matric qualification and thus indicate that they either at school, unemployed or highly dependant to their parents or living with them.

Below is the graphical presentation: For how many years have you been employed (code: b6)

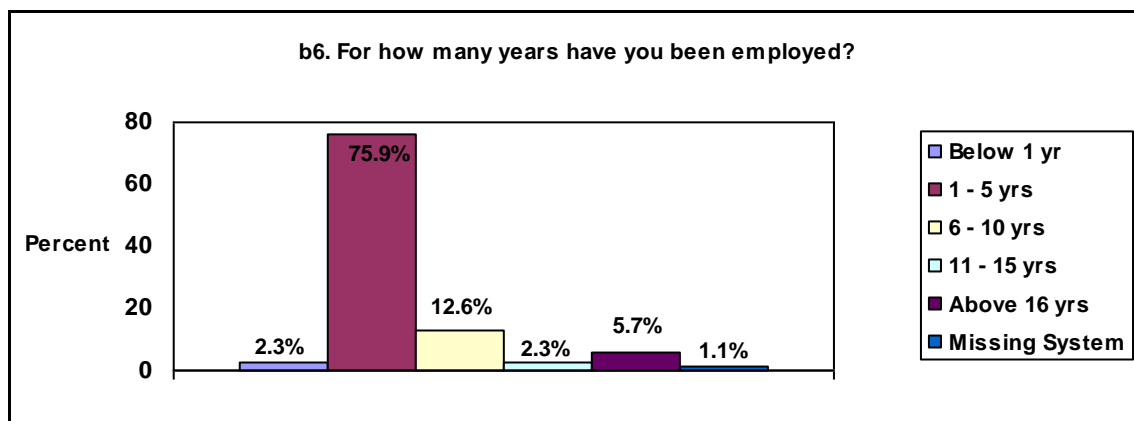


Figure 4.6: Graphical representation according to Years of Employment,

Respondents as per the above figure reveal comparison dispersion results of respondents' duration of employment. Respondents below 1 year were 2,3% (2), almost 75,9% (66) were between 1-5 years of employment, 12,6% (11) of respondents are between 6-10 years, 2,3% (2) respondents were between the range of 11-15 years of employment, over 5,7% (5) are above 16 years, and 1.1% had the missing system and may not be considered for this research "For how many years have you been employed" and may not form part of this research.

The respondents between the ranges of 1-5 years of employment were at 75.9%. That signifies the number of respondents rendering the essential services within the public sector. Respondents employed for a period of over 16 years were at 5.7% and thus indicate that during their retirement period they may benefit by taking the ownership of the government house permanently.

Below is the graph presenting the main organizational functions (code: b7)

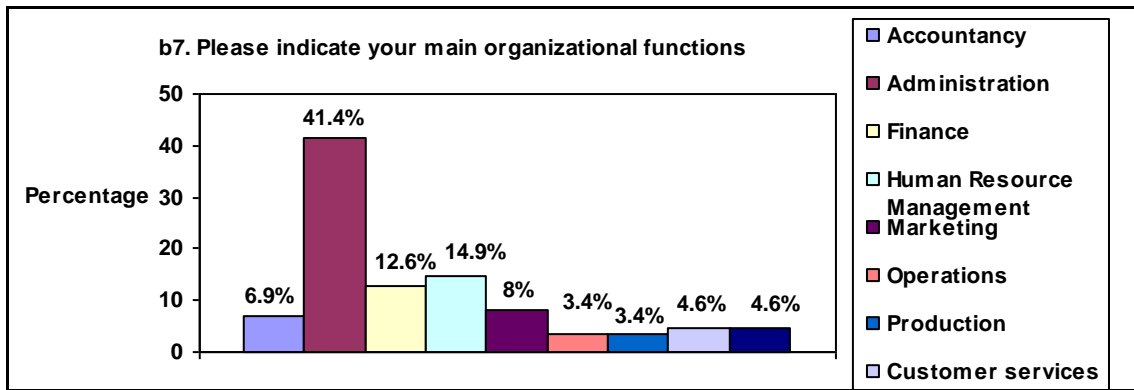


Figure 4.7: Graphical representation according to main organizational functions

The above figure reveals the main organizational function of each tenant with its area of competency or responsibility. The study reveals 6,9% (6) of the respondents were in the field of Accountancy, almost 41,4% (36) of the respondents were in the field of Administration, over 12,6% (11) were in Finance, almost 14,9% (13) are in Human Resource Management, over 8,0% (7) were exposed to Marketing, almost 3,4% (3) respondents indicated that they were in Operations field, over 3,4% (3) respondents were dealing with Production, 4, 6% (4) respondents indicated that they were from Customer services, and 4, 6% (4) respondents revealed that they do “Other” organizational function.

The 41,4% respondents signifies that the majority were performing Administration work and probably being employed by the public sector to render essential services to their customers and they perhaps received the first preference of being allocated with a state house, followed by the Human Resource Management. Almost 3, 4% respondents were both working for the Operations and Production field which shows that the respondents were more on technical side of employment.

They could be either executing the maintenance work at all government houses as artisans or something else.

Below is the figure presenting the type of property occupied by tenants (**code: s1.1**)

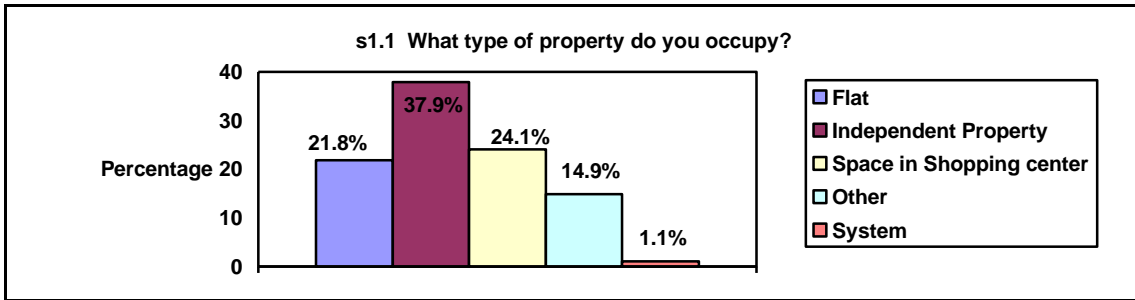


Figure 4.8: Graphical representation of the results of the question: What type of property the tenants occupy?

The above figure demonstrates the type of properties the respondents occupy. Almost 21,8% (19) were respondents occupying the “Flat” government property, 37,9% (33) which is significantly a higher number of respondents that were occupying Independent Properties of the government houses, almost 24,1% (21) respondents were tenants that occupied a “Space in Shopping centre” type of a government property, over 14,9% (13) of the respondents were occupying “Other” government property which do not belong to the above type of government properties, and 1,1% (1) had a missing information and will not be considered for the purpose of this study. Almost 37.9% of the respondents occupied the individual properties like- single storey houses on the ground. The least respondents at 14.9% were occupying other type of government houses for an example: the wooden shelters, improper shelters etc. Below is the graph representing: how is the physical appearance of the property the physical appearance of the property (code: s1.2)

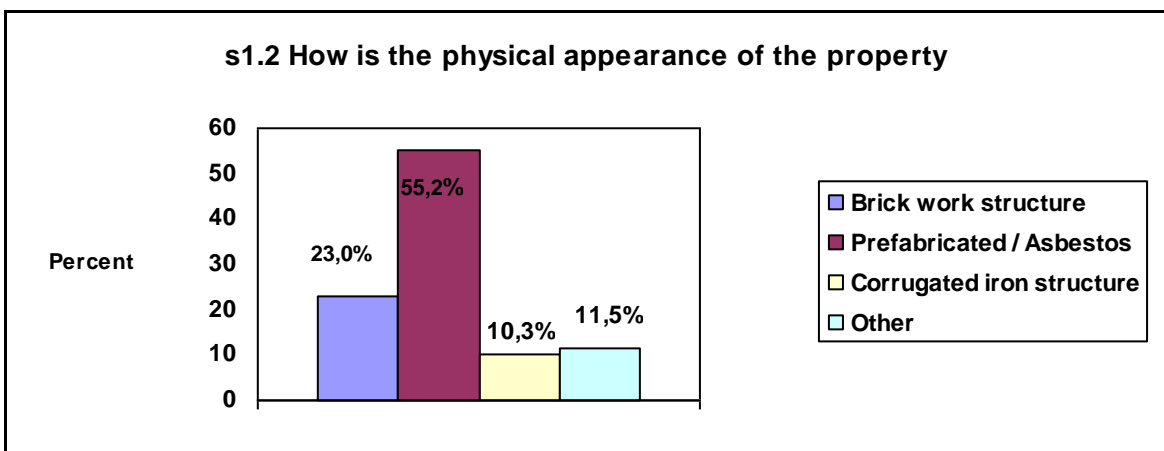


Figure 4.9: Graphical representation of the results of the question: How is the physical appearance of the property?

The above figure will demonstrate various categories of the government property the respondents occupy.

Over 23,0% (20) respondents indicated that they were occupying **“Brickwork structure, almost 55,2% (48) respondents as indicated by a majority were occupying “Prefabricated/Asbestos government houses, over 10,3% (9) respondents indicated that they were occupying “Other” types of properties, and 11,5% (10) respondents were occupying “Corrugated iron structure”.**

Almost 23.0% respondents were occupying the well structured brickwork government properties. Just 55.2% of the respondents were occupying the prefabricated house as they are plenty in the Mpumalanga Province. The least respondents at 10.3% were occupying the corrugated iron structures which also belong to the government assets.

Below is the graphical presentation: For how long have you been occupying the property? **(Code: s1.3)**

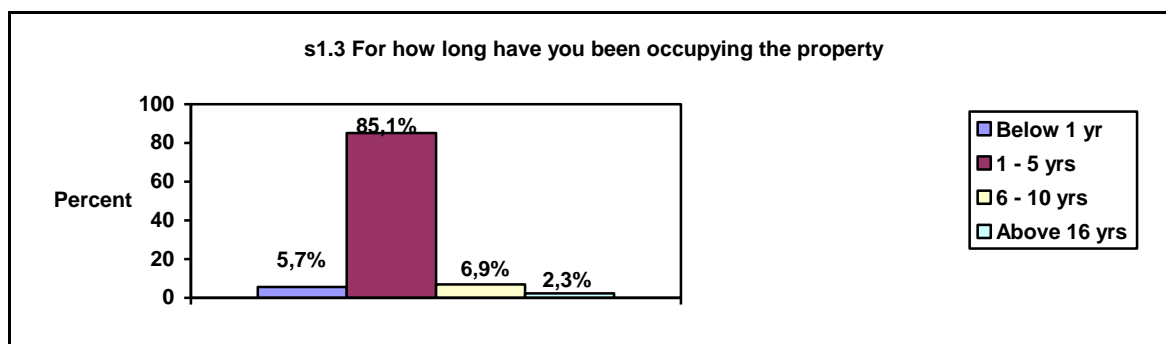


Figure 4.10: Graphical representation of the results of the question: How long one has been occupying the property?

The research will investigate the duration of property occupation by the respondents. Almost 5,7% (5) tenants occupied the houses less than or below 1 year, the graph above revealed 85,1% (74) respondents as the majority that occupied government houses between the range of 1-5 years period, 6,9% (6) respondents occupied the houses between 6-10 years, and 2,3% (2) respondents occupied houses were above 16 years. Graphical presentation on how the service quality standards are **(Code: s1.4)**

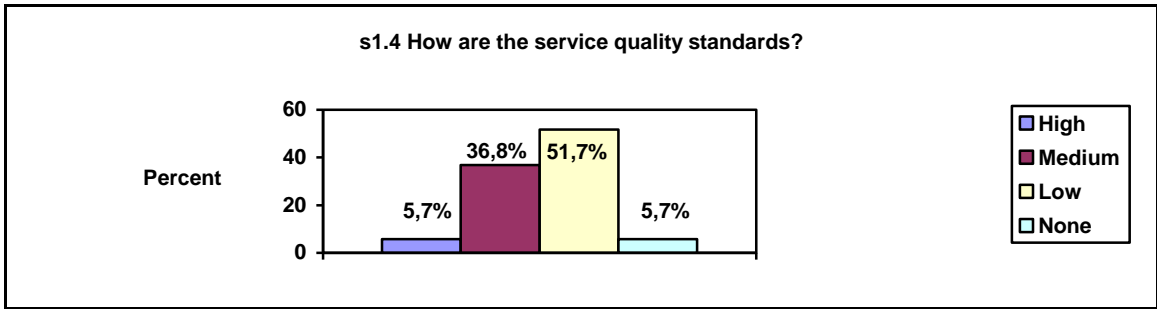


Figure 4.11: Graphical representation of the results of the question: How the service quality standards are?

The study will determine the type of service quality standards the respondents receive from the DPW. Over 5,7% (5) were receiving high service quality standards, There were almost 36,8% (32) respondents were getting medium service quality standards, over 51,7% (45) respondents indicated that they were receiving low service quality standards from the DPW, and almost 5,7% (5) respondents have received “None” of the service quality standards for the properties they were occupying. Graphical presentation of the results of the question: how reliable the service rendered to one is (code: s1.5).

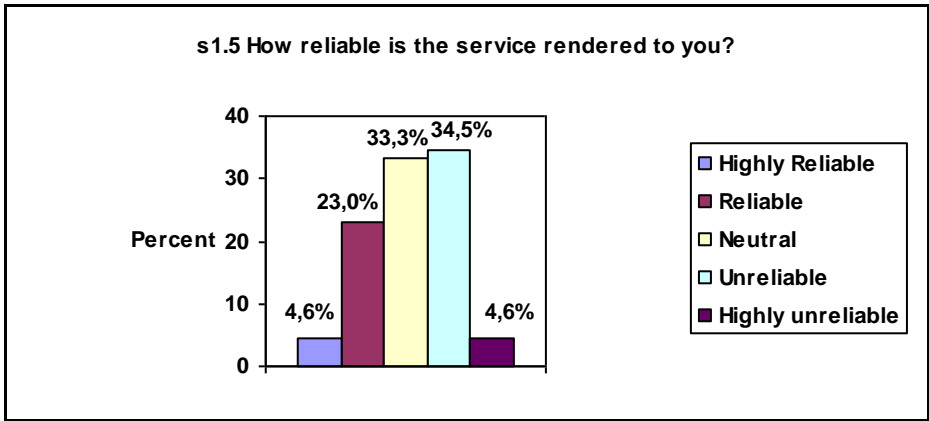


Figure 4.12: Graphical representation of the results of the question: How reliable the service rendered to one is?

The above figure will show various perceptions on the reliability of service rendered to the respondents. About 4,6% (4) of the respondents were rendered with the “Highly reliable” service, just over 23,0% (20) respondents indicated that they were rendered with the “Reliable” service, over 33,3% (29) of the respondents were “Neutral” and not sure of the service rendered to them, almost 34,5% (30) respondents indicated that there were “Unreliable” rendering of services to them,

and over 4,6% (4) respondents indicated that the department provided the “Highly unreliable” service to them.

Below is the graphical representation: Does the DPW able to perform the promised service (**code s1.6**)

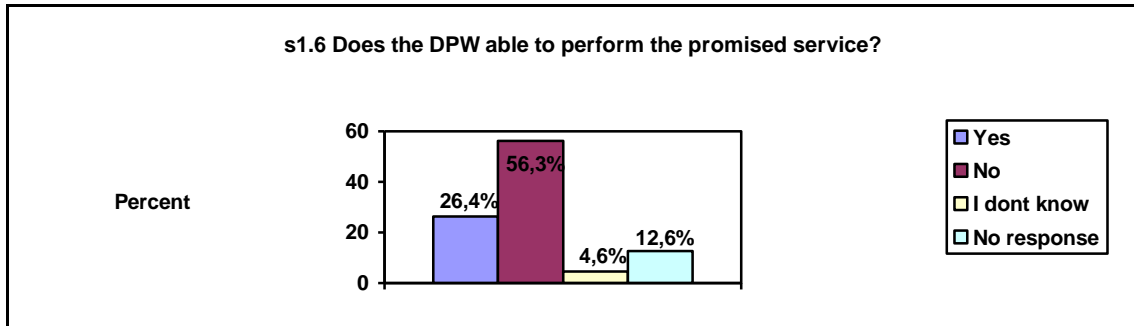


Figure 4.13: Graphical representation of the results of the question: How the DPW is able to perform the promised service?

The study will determine whether the DPW were enabled to perform the promised service to the respondents. Almost 26,4% (23) respondents indicated that they were convinced about the promised service DPW was performing.

The above figure also demonstrates 56,3% (49) respondents did not concur about the promised service rendered by DPW, almost 4,6% (4) respondents did not know whether DPW performed the promised service, over 12,6% (11) respondents have “No response”.

Below is the graphical representation: How long does DPW take to respond on the complaints? (**Code: s1.7**)

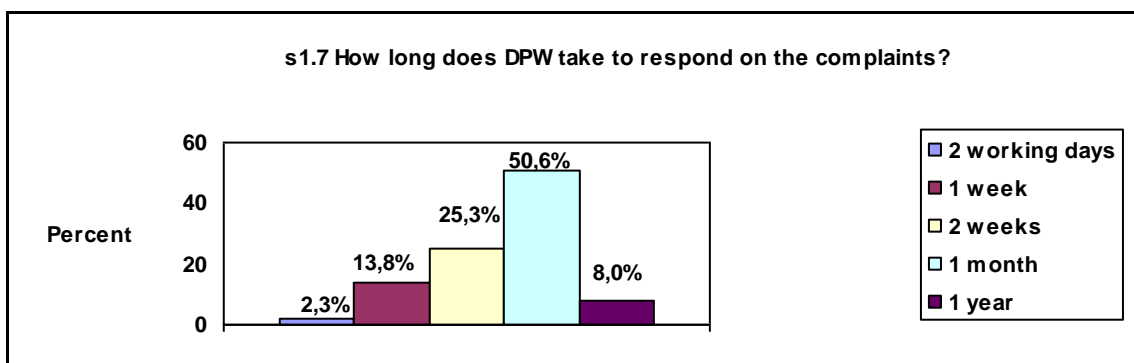


Figure 4.14: Graphical representation of the results of the question: How long does DPW take to respond on the complaints?

The aforementioned figure reveals the period within which the DPW takes to respond on the complaints. The indication is that there were 50,6% (44) respondents that get complaints' response in a month's time, 25,3% (22) respondents that receive complaint response in "2 weeks" time, 13,8% (12) get responses in a week's time, 8,0% (7) receive responses in a year's time, and 2,3% (2) respondents get the response in "2 working days".

Below is the graphical representation: Is DPW responsible for the maintenance of properties? **(Code: s1.8)**

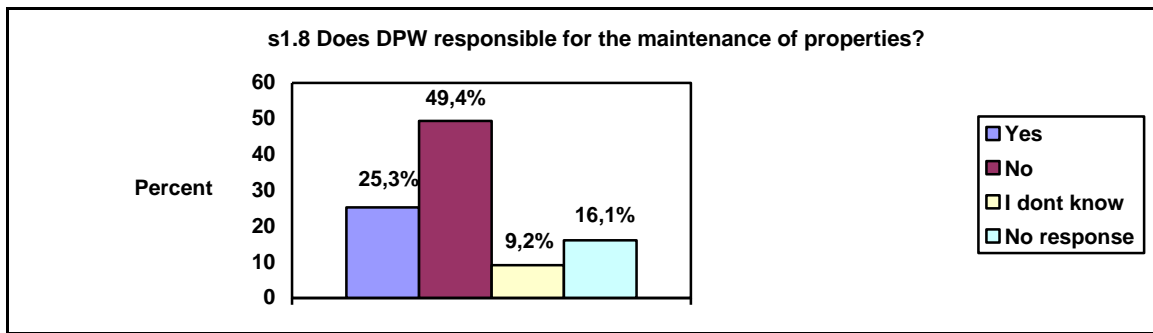


Figure 4.15: Graphical representation of the results of the question: Whether or not DPW is responsible for the maintenance of properties

In this part the researcher examined whether the DPW was responsible for the maintenance of the respondent's properties. Above is the bar graph that revealed the different opinions by respondents on maintenance of properties the DPW executed.

There were 25, 3% (22) respondents concurred that DPW was responsible for the maintenance of the properties, over 49, 4% (43) of the respondents were denying that DPW was not responsible for the maintenance of properties, over 9, 2% (8) of the respondents have indicated "I don't know" whether DPW was responsible for the maintenance of properties, and almost 16, 1% (14) of the respondents had "No response".

Below is the graphical presentation: How does DPW treat you as an individual in your needs? **(Code: s1.9)**

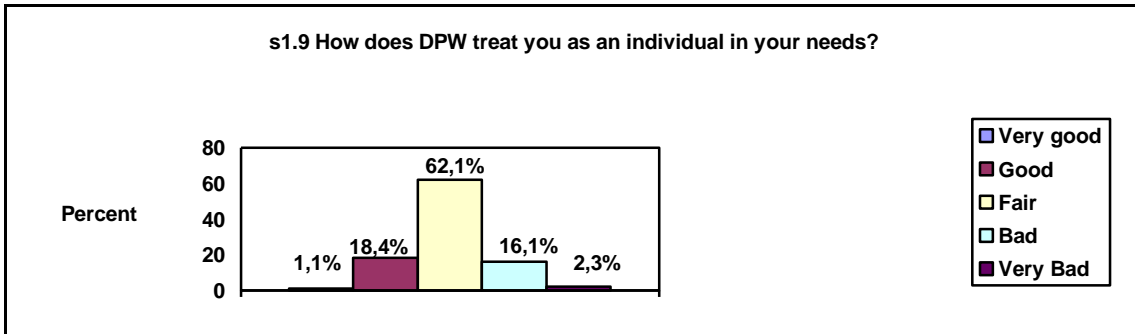


Figure 4.16: Graphical representation of the results of the question: How does DPW treat you as an individual in your needs?

In this part the researcher observed on how the DPW treated respondents' needs individually. Above is the figure that revealed the way DPW treated each respondent based on the needs. A very small number of about 1,1% (1) respondents indicated that they are receiving "Very good" treatment based on their needs, almost 18,4% (16) of the respondents indicated that the treatment is "Good" when it comes to an individual's need, over.62,1% (54) of the respondents indicated that the treatment is "Fair", just over 16,1% (14) respondents indicated that the treatment is "Bad" with regard to individual's need, less than 2,3% (2) responses were "Very Bad" from the respondent's point of view.

Below is the graphical presentation: How competent are the maintenance artisans? (**Code: s1.10**)

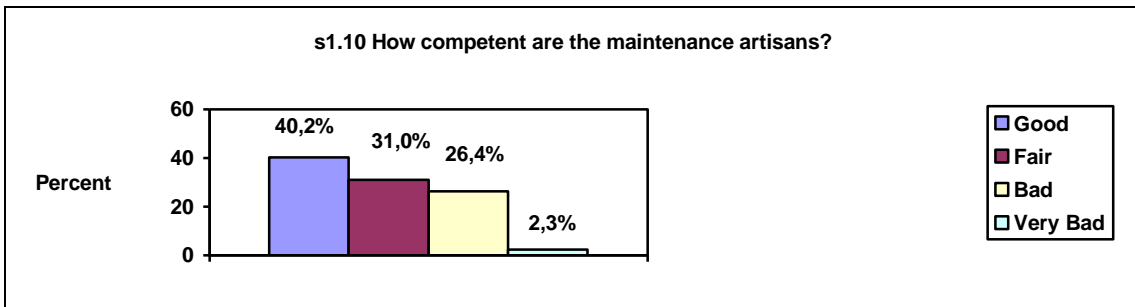


Figure 4.17: Graphical representation of the results of the question: How competent are the maintenance artisans?

The above figure demonstrates the views of respondents on the artisan's competency with regard to the maintenance of the government properties. Almost 40,2% (35) respondents regarded maintenance artisans as "Good" which signifies adequate competency in handling maintenance work, 31,0% (27) were "Fair " responses on the artisan's competency, almost 26,4% (23) respondents indicated

that they receive “Bad” service based on the artisan’s competency on maintenance work, almost 2,3% (2) responses are “Very Bad” on the artisan’s competency with regard to maintenance work.

Below is the graphical representation: How secured is the property you are occupying **(Code: s1.11)**

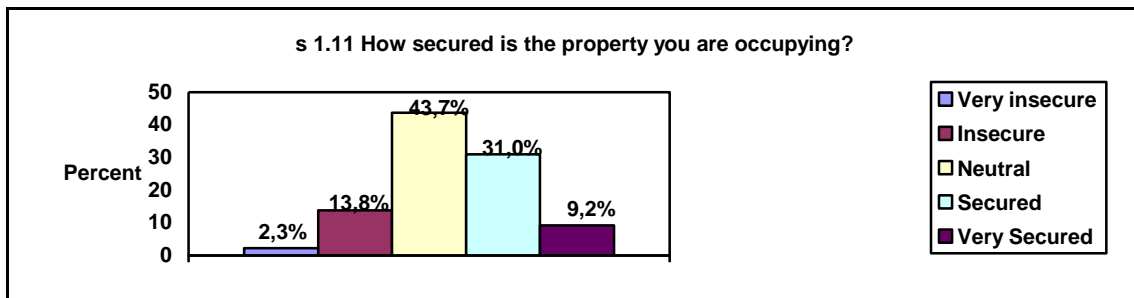


Figure 4.18: Graphical representation of the results of the question: How competent are the maintenance artisans?

The above figure reveals the respondent’s perception on the security of the properties they occupy. Almost 2,3% (2) respondents indicated that properties are “Very Insecured”.43,7% (38) respondents were “Neutral”, almost 31,0% (27) of respondents indicated that the properties are secured, 13,8% (12) respondents indicated that the properties are “Insecured”, 9,2% (8) respondents indicated that properties are “Very Secured”.

Below is the graphical representation: How accessible is your property? **(Code: s1.12)**

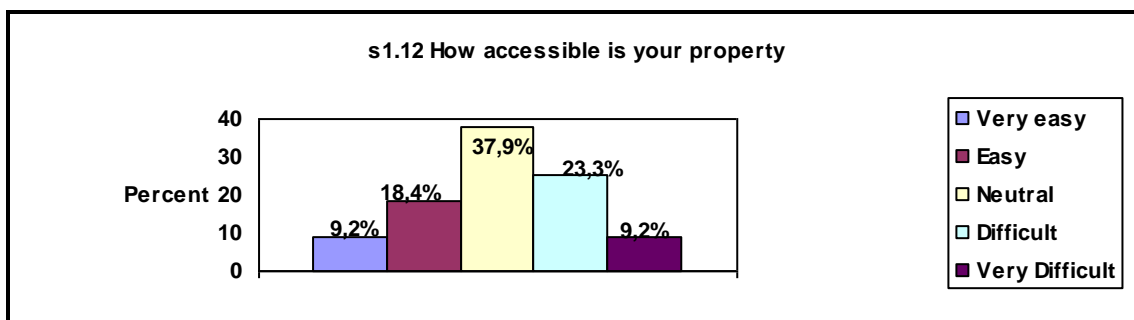


Figure 4.19: Graphical representation of the results of the question: How accessible is your property?

The aforementioned figure demonstrates the perception of respondents with regard to the accessibility to their properties. Just over 9,2% (8) respondents

responses that are “Very easy” to be accessed, over 18,4% (16) respondents response that properties are “Easy” to access, almost 37,9% (33) respondents responses were ‘Neutral, over 23,3% (22) respondents indicated that some of the properties are not easily accessible and are “Difficult in accessing them, and almost 9,2% (8) respondents indicated that the properties are “Very Difficult” to be accessed.

Below is the graphical presentation: How polite is the property staff? **(Code: s1.13)**

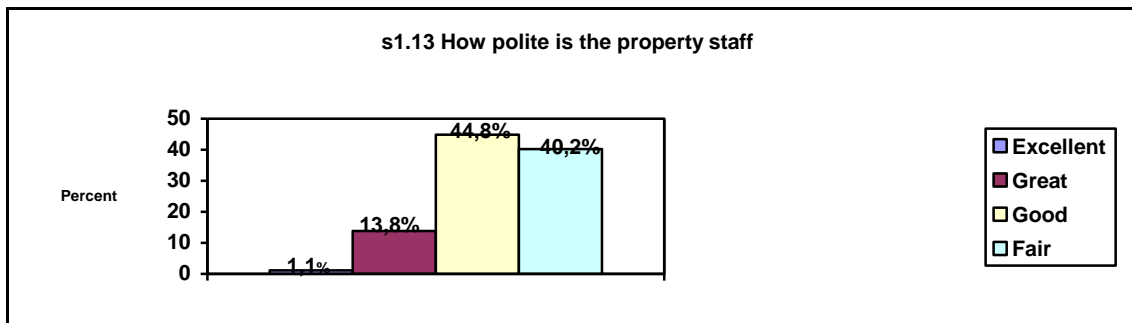


Figure 4.20: Graphical presentation of the results of the question: How polite is the property staff?

The research purpose is to determine how polite property staff in the DPW is. The figure reveals the extent of the property’s staff politeness. Less than 1, 1% (1) respondent indicated property staff was “Excellent” with regard to politeness, over 13, 8% (12) respondents pointed out that property staff was “Great”, Almost 44, 8% (39) respondents indicated that the property staff is “Good”, 40, 2% (35) respondents indicated that the property staff’s politeness was “Fair”.

Below is the graphical presentation: How often does your property get maintained? **(Code: s1.14)**

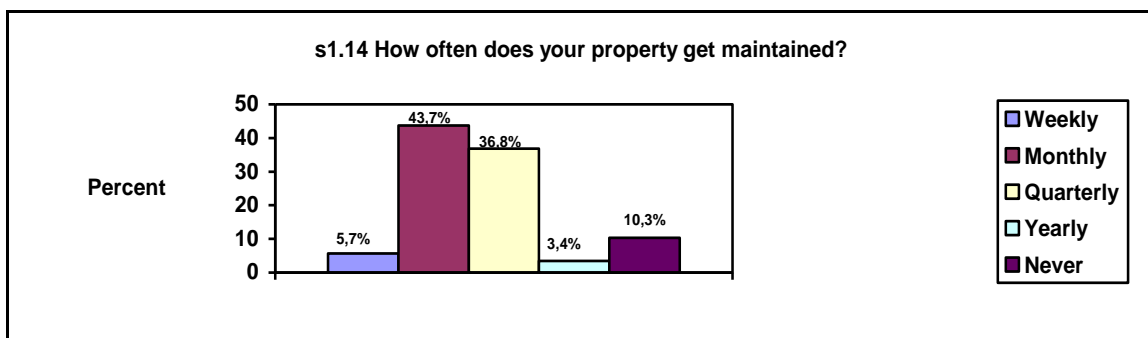


Figure 4.21: Graphical presentation of the results of the question: How often does your property get maintained?

The figure below demonstrates the frequency of maintenance on property. Almost 5,7% (5) respondents' properties were maintained on a weekly basis, over 43,7% (38) majority respondents indicated that the property gets maintained on monthly basis, over 36,8% (32) respondents indicated that their properties get maintained on a quarterly basis, almost 3,4% (3) respondents' properties were maintained on a yearly basis, and almost 10,3% (9) respondents' properties were never attended to or maintained it could be due to the lack of resources, scarce skills.

Below is the graphical presentation: The DPW Provides world class properties **(Code: s2.1)**

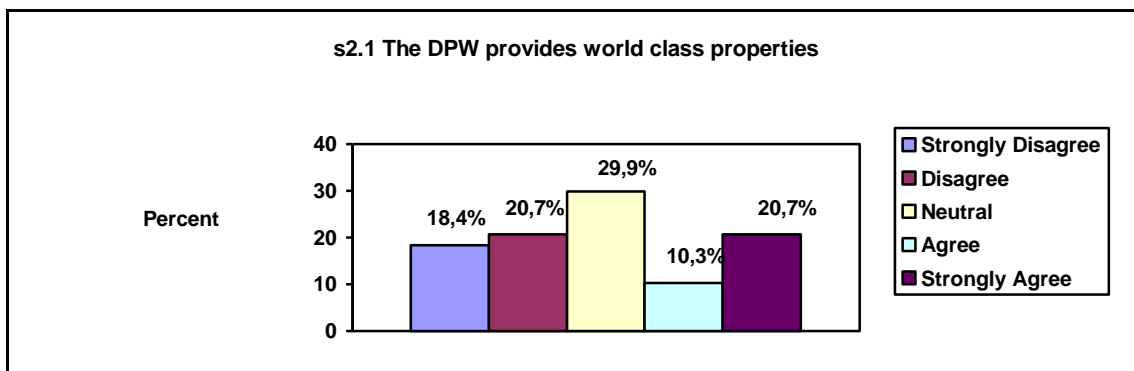


Figure 4.22: Graphical representation of the results of the Statement: The DPW provides world class properties

The respondents were asked to evaluate each question as per the distributed questionnaires using the five point Likert Scale: 'Strongly Disagree', 'Disagree', 'Neutral', 'Agree', and 'Strongly Agree'. The indicated above figure reveals perceptions of participated respondents in this project, they have expressed 18.4 % (16) Strongly Disagree, almost 20.7 % (18) Disagree, over 29.9 % (26) neutral, just 10.3 % (9) agree and 20.7 % (18) Strongly Agree towards study statement s2.1: the DPW provides world class properties. The above interpretation results is that 29,9% (26) is the frequencies or number of respondents whose opinion is "Neutral" which could indicate that respondents are unsure of the properties they occupy or unsure of the property classification.

Below is the graphical presentation: The DPW has modern and clean properties **(Code: s2.2)**

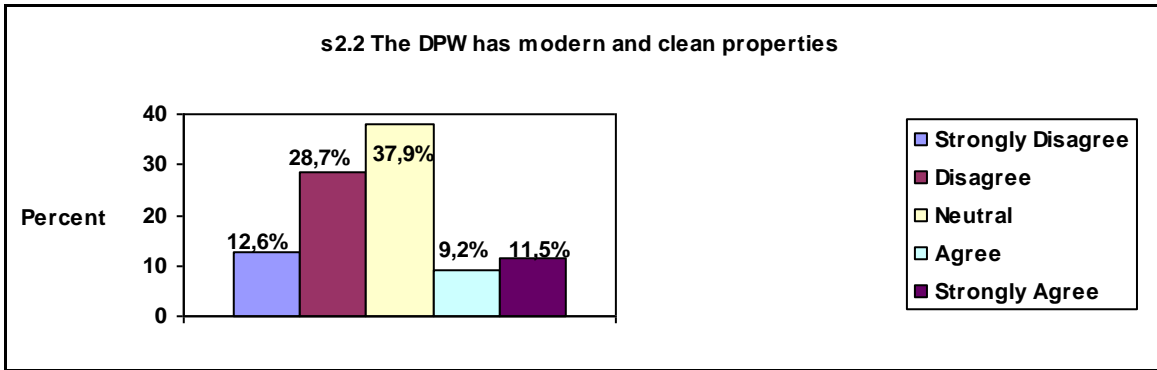


Figure 4.23: Graphical representation of the results of the Statement: The DPW has modern and clean properties

In this section the research is trying to determine whether DPW provides modern and clean properties to the respondents. Above is the figure that reveals perceptions of participated respondents in this project, have expressed 12,6% (11) Strongly Disagree, over 28.7% (25) “Disagree”, majority of respondents were 37,9% (33) they remained neutral about the type of properties they receive from DPW, over 9,2% (8) Strongly Agree towards study statement s2.2: the DPW has modern and clean properties, and 11.5% (10) respondents Strongly Agree that DPW provides modern and clean properties.

Below is the graphical representation: The DPW provides variety and quality equipments (**Code: s2.3**)

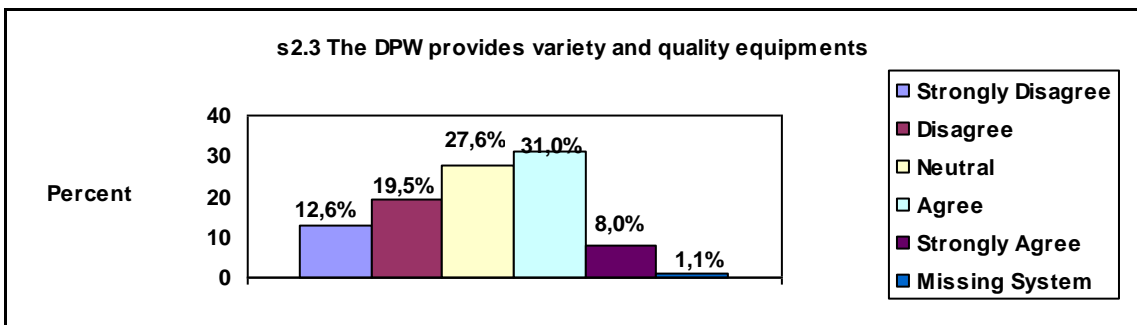


Figure 4.24: Graphical presentation of the results of the Statement: The DPW provides variety and quality equipments

In this part the study intends to examine whether the DPW definitely provides variety and quality equipments in the respondent’s houses. The above figure demonstrates the perceptions of the respondents participated in the project with regard to the variety and quality equipments DPW provides.

The above figure reveals 12,6% (11) respondents Strongly Disagree, over 19,5% (17) Disagree, almost 27,6% (24) neutral, over 31,0% (27) respondents signifies high proportion of agreeing that DPW provides variety and quality equipments, almost 8,% (7) Strongly Disagree, just less than 1,1% (1) of the responses had missing system whereby a respondent could not furnish the information and will not be considered for the purposes of the research.

Below is the graphical representation: The DPW provides variety and choices of properties **(Code: s2.4)**

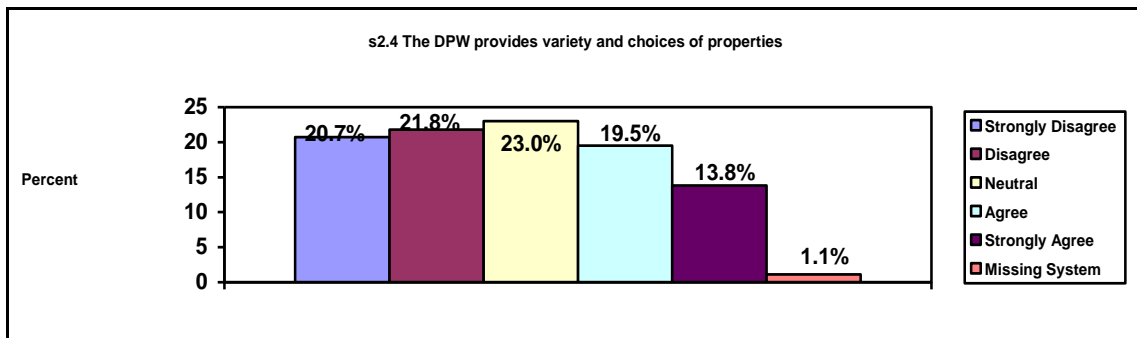


Figure 4.25: Graphical representation of the results of the Statement: The DPW provides variety and choices of properties

The above figure reveals perceptions of participated respondents in this project, they have expressed 20.7 % (18) Strongly Disagree, 21.8 % (19) Disagree, 23.0 % (20) Neutral, 19.5 % (17) Agree and 13.8 % (12) Strongly agree, and just 1,1% (1) missing system whereby a respondent could not furnish the information and will not be considered for the purposes of the research.

Below is the graphical representation: The DPW performs the service quality for the first time **(Code: s2.5)**

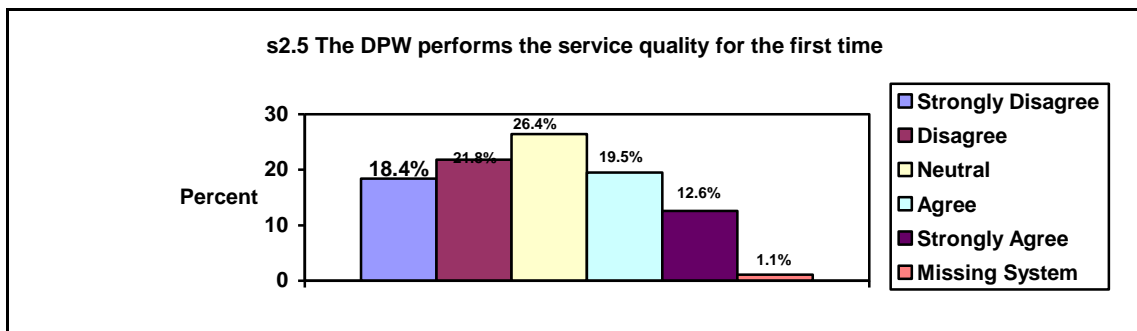


Figure 4.26: Graphical representation of the results of the Statement: The DPW performs the service quality for the first time

The above figure reveals the perceptions of participated respondents in this project, they have expressed 18.4 % (16) Strongly Disagree, 21.8 % (19) Disagree, 26.4 % (23) Neutral, 19.5 % (17) Agree and 12.6 % (11) Strongly Agree, and just 1,1% (1) missing system whereby a respondent could not furnish the information and will not be considered for the purposes of the research.

Below is the graphical representation: The DPW provides property services consistently **(Code: s2.6)**

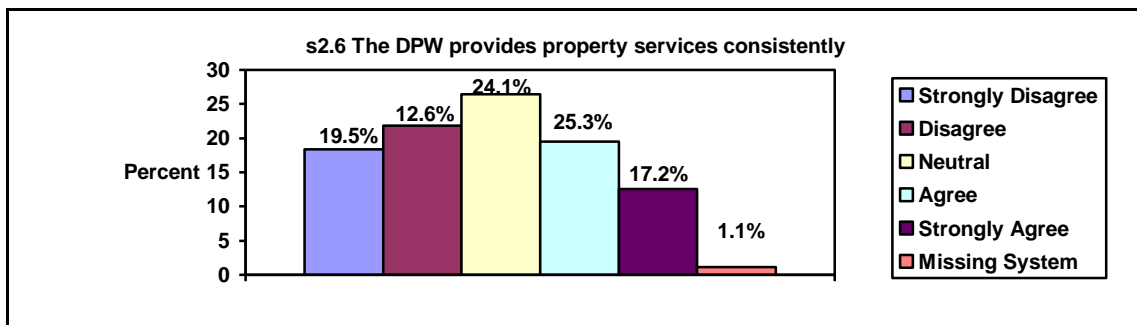


Figure 4.27: Graphical representation of the results of the Statement: The DPW provides property services consistently

The above figure's results reveal perceptions of participated respondents in this project, they have expressed 19.5 % (17) Strongly Disagree, 12.6 % (11) Disagree, 24.1 % (21) Neutral, 25.3 % (22) Agree and 17.2 % (15) Strongly Agree, and just 1,1% (1) missing system whereby a respondent could not furnish the information and will not be considered for the purposes of the research.

Below is the graphical representation: The DPW provides remedial procedures for emergency repairs **(Code: s2.7)**

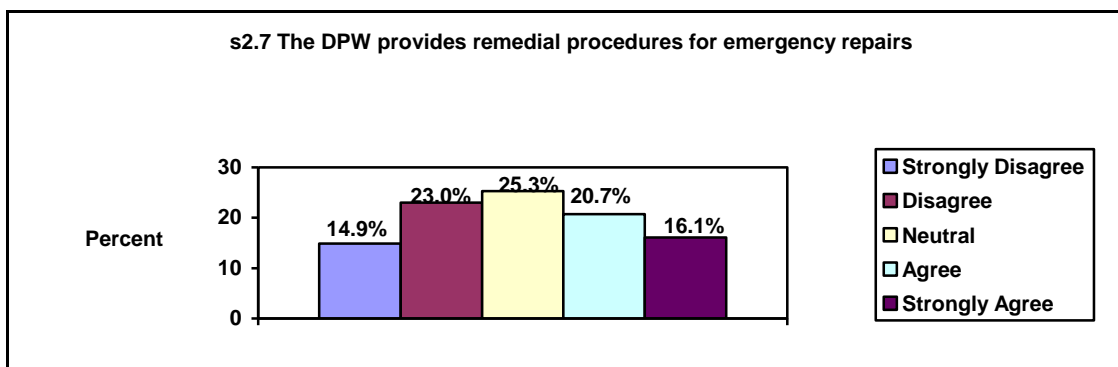


Figure 4.28: Graphical representation of the results of the Statement: The DPW provides remedial procedures for emergency repairs

The above figure's results reveal perceptions of participated respondents in this project, they have expressed 14.9% (13) Strongly Disagree, 23.0% (20) Disagree, 25.3 % (22) Neutral, 20.7 % (18) Agree and 16.1 % (14) Strongly Agree, and just 1,1% (1) missing system where a respondent failed to furnish the information.

Below is the graphical representation: The DPW provides reliable maintenance **(Code: s2.8)**

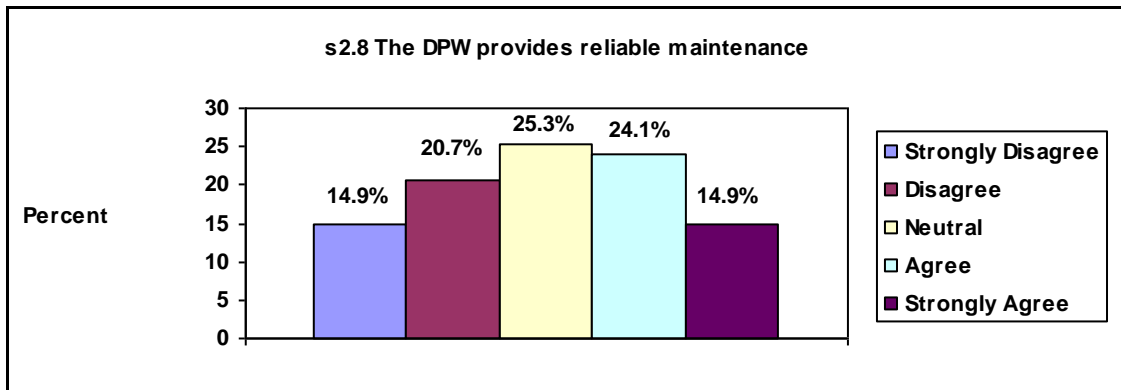


Figure 4.29: Graphical representation of the results of the Statement: The DPW provides reliable maintenance

The above figure reveals perceptions of participated respondents in this project, they have expressed 14.9% (13) Strongly Disagree, 20.7 % (18) Disagree, 25.3% (22) Neutral, 24.1% (21) Agree, and 14.9% (13) Strongly Agree that DPW provides reliable maintenance to their properties they occupied.

Below is the graphical representation: The DPW employees provide prompt respond to your request or complaint **(Code: s2.9)**

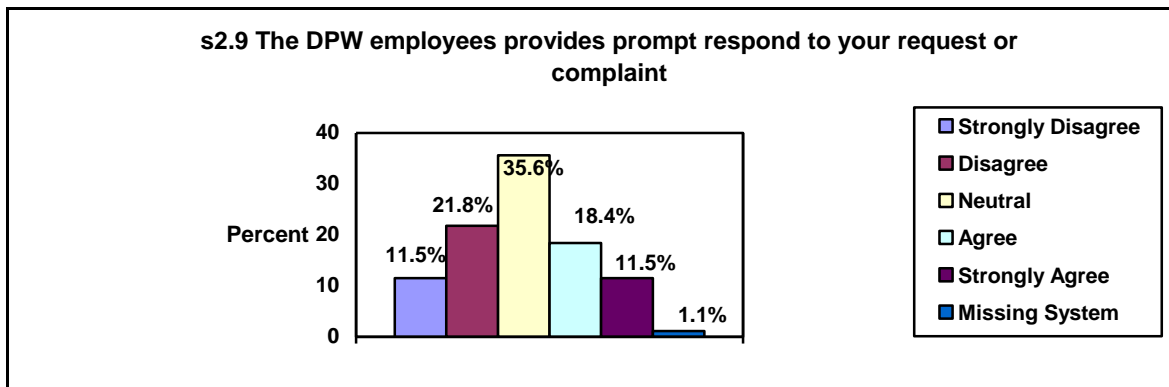


Figure 4.30: Graphical representation of the results of the Statement: The DPW provides prompt respond to one's request or complaint

The aforementioned figure reveals perceptions of participated respondents in this project, they have expressed 11.5% (10) Strongly Disagree, 21.8 % (19) Disagree, 35.6% (31) Neutral, 18.4% (16) Agree, and 11.5% (10) Strongly Agree that DPW provides reliable maintenance to their properties they occupied, and just 1, 1% (1) missing system whereby a respondent could not furnish the information and will not be considered for the purposes of the research.

Below is the graphical representation: The DPW provides prompt attention to your specific needs **(Code: s2.10)**

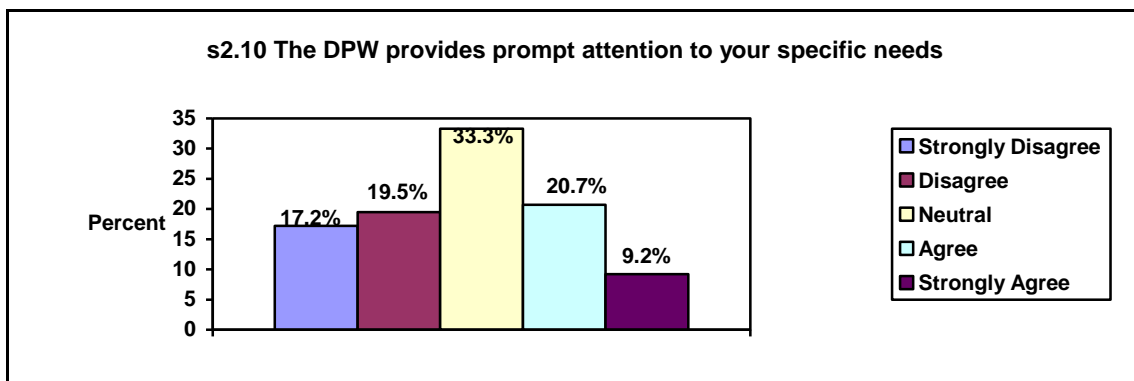


Figure 4.31: Graphical representation of the results of the Statement: The DPW provides prompt attention to your specific needs

The above figure reveals perceptions of participated respondents in this project, they have expressed 17.2% (15) Strongly Disagree, 19.5 % (17) Disagree, 33.3% (29) Neutral, 20.7% (18) Agree, and 9.2% (8) Strongly Agree that DPW provides prompt attention to the respondent’s specific needs.

Below is the graphical representation: The DPW understands your specific needs **(Code: s2.11)**

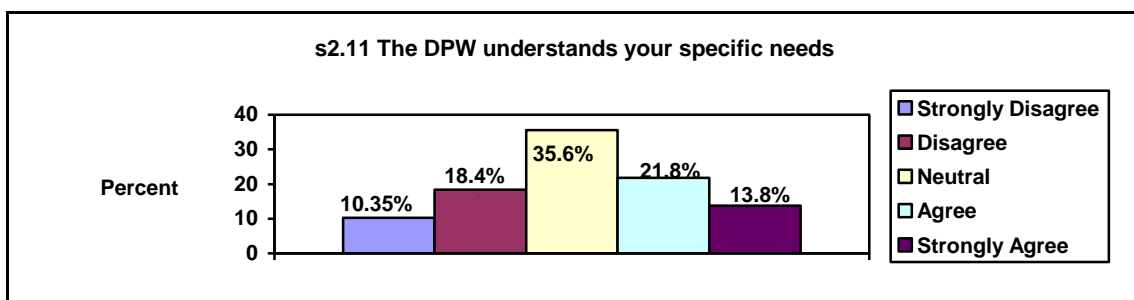


Figure 4.32: Graphical representation of the results of the Statement: The DPW understands your specific needs

The above figure's results reveal perceptions of participated respondents in this project and to establish whether the respondents understand DPW specific needs. They have expressed that 10.3% (9) Strongly Disagree, almost 18.4% (16) of the respondents Disagree, and just 35.6 % (31) of the participants were Neutral, almost 21.8 % (19) respondents Agreed and 13.8 % (12) respondents Strongly Agree. It does show that 35.6% were the respondents who indicated to be Neutral when it comes to the DPW's understanding of their needs, and with the highest percentage as compared to the others.

Below is the graphical representation: The DPW keeps you informed about when services will be performed **(Code: s2.12)**

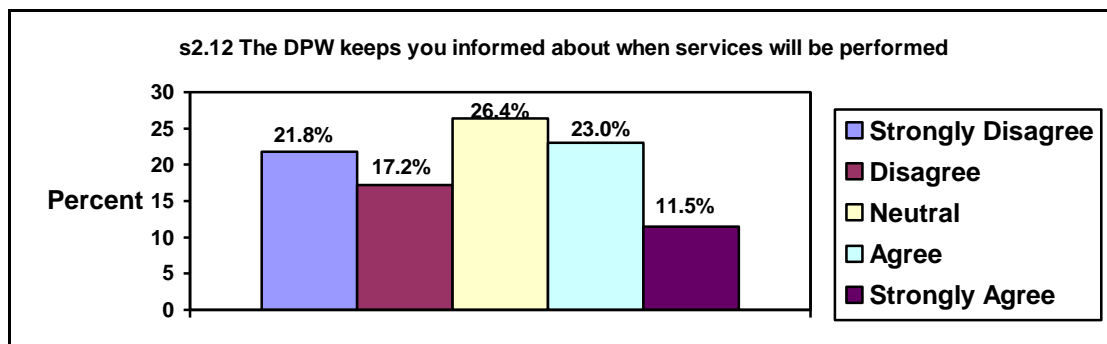


Figure 4.33: Graphical representation of the results of the Statement: DPW keeps you informed about when services will be performed

The significance of the study is to determine the respondent's perception with regard to the promptness of the service to be performed by DPW. The figure's results reveal whether the respondents are kept abreast of when the service will be performed. In this project 21.8%(19) respondents have expressed Strongly Disagree, almost 17.2% (15) of the respondents Disagree, almost 26.4 % (23) of the respondents were Neutral, with 23.0 % (20) of the respondents Agreed and just 11.5 % (10) of them Strongly Agree.

The figure indicates the majority of respondents were Neutral that DPW keeps the tenants informed when services will be performed. Only a very small number of respondents have Strongly Agreed with the DPW by informing the tenants about the time within which the service will be performed. In this part the researcher examined the respondent's perception on whether the DPW keeps the tenants

informed about when the services would be performed, especially when repairs and maintenance of the house would take place.

Below is the graphical representation: The DPW provides sincerity and patience in resolving your problems (**Code: s2.13**)

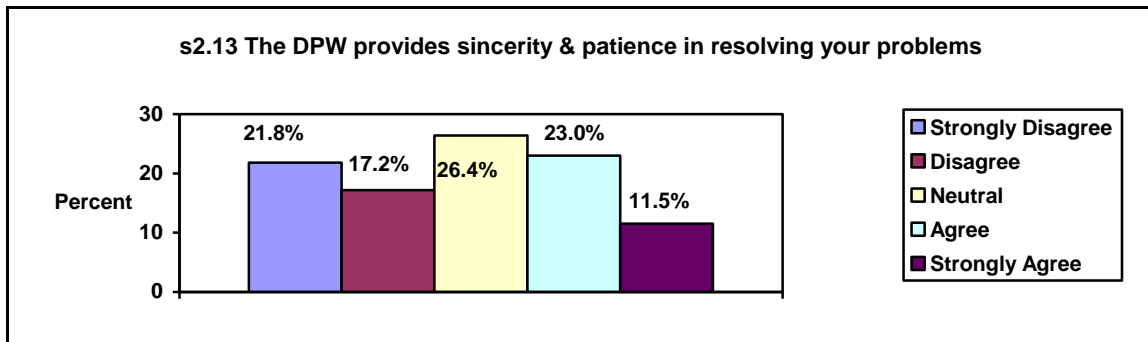


Figure 4.34: Graphical representation of the results of the Statement: The DPW provides sincerity and patience in resolving your problems

Almost 21.8% (19) respondents strongly disagreed about the way DPW provides sincerity and patience in resolving the tenant's problems, 17.2% (15) respondents have Disagreed, 26.4% (23) respondents were Neutral, respondents of about 23.0% (20) Agree, almost 11.5% (10) respondents indicated that they Strongly Agree. The majority respondents remained neutral that DPW provides sincerity and patience in resolving the tenant's problem if a maintenance or repair complaint has been lodged.

Below is the graphical representation: The DPW provides safety performance of the property (**Code: s2.14**)

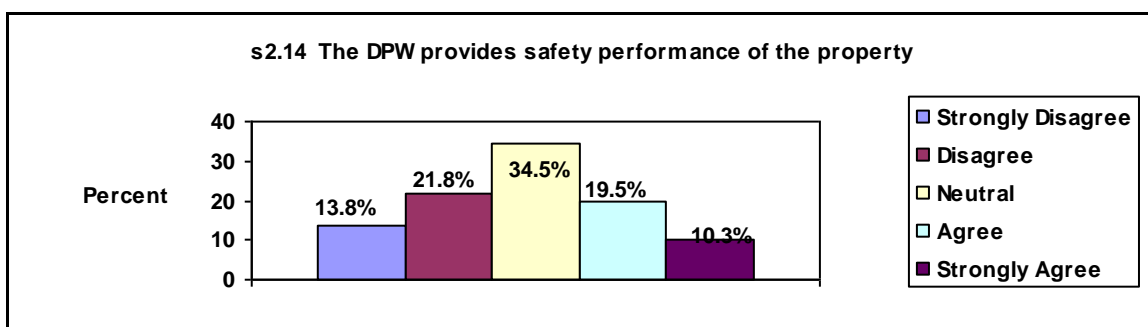


Figure 4.35: Graphical representation of the results of the Statement: The DPW provides safety performance of the property

The study intended to establish whether DPW provides safety performance of property to the tenants. Almost 13.8% (12) respondents Strongly Agreed about the safety performance of the property, and 21.8% (19) respondents were Strongly Disagree with the DPW's service, 34.5% (30) respondents were Neutral and not too sure whether DPW provides safety performance of the property to them or not, just 19.5% (17) respondents were agreeing with the above statement, and almost 10.3% (9) respondents were Strongly Agreeing. The graph shown above demonstrates that the majority of respondents almost 34.5% were Neutral not too sure about the safety performance of property the DPW provides.

Below is the graphical representation: The DPW employees are knowledgeable to answer customer questions **(Code: s2.15)**

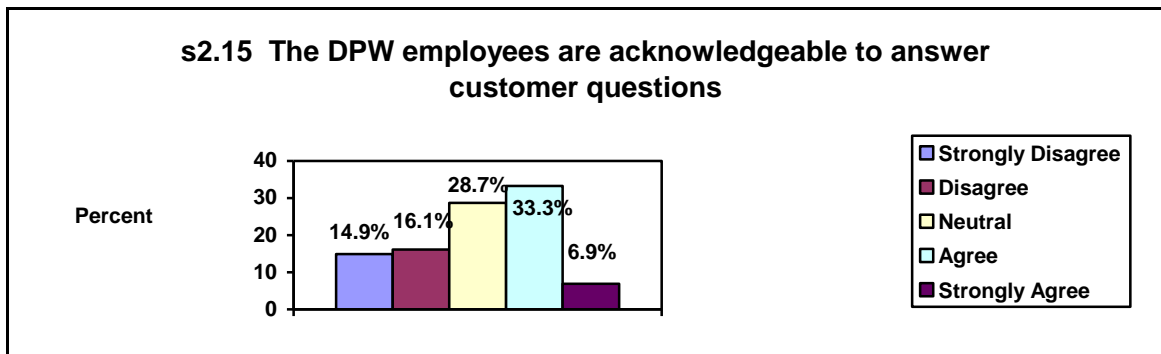


Figure 4.36: Graphical representation of the results of the Statement: The DPW employees are knowledgeable to answer customer questions

The aforementioned figure reveals results of whether the DPW employees are knowledgeable to answer customer questions. The results showed that 14.9% (13) of the respondents were Strongly Disagreed with the above statement, 16.1% (14) were respondents that Disagreed with such statement, and almost 28.7% (25) of the respondents remained Neutral without any notion. Large percentages of respondents were Neutral, unsure of the DPW's employees knowledge in answering customer's questions.

Less percentage of respondents strongly disagreed with DWP employee's knowledge with regard to the answering of customer's questions. Just 33.3% (29) of them Agreed, and 6.9% (6) respondents which is the least percentage of

respondents Strongly Agreed about the perception and strongly believed that DPW's employees were capable enough to respond to the customer's questions.

Below is the graphical representation: The DPW employees are consistently courteous (**Code: s2.16**)

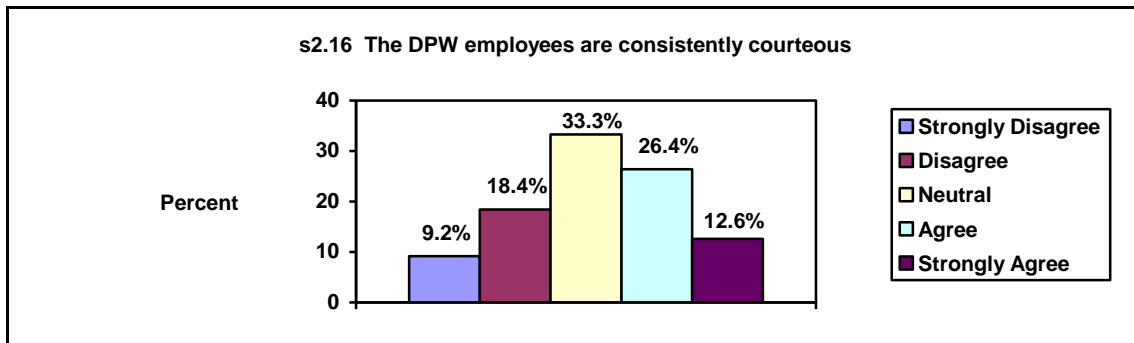


Figure 4.37: Graphical representation of the results of the Statement: The DPW employees are consistently courteous

In this section the respondents were asked to evaluate the DPW's employees whether they provide consistent courtesy to the tenants who occupied the government property. Almost 9.2% (8) of the respondents were Strongly Disagreeing, just 18.4% (16) of the respondents agreed with the statement, 33,3% (29) respondents were Neutral, 26.4% (23) were agreeing that DPW employees are consistently courteous when providing services to the tenants occupying the houses, and 12.6% (11) were the least respondents to Strongly Disagree with the above statement.

It therefore shows that most respondents tend to remain neutral when it comes to the services rendered to them by the DPW employees. Below is the graphical presentation: The DPW provides convenient maintenance schedule (**Code: s2.17**)

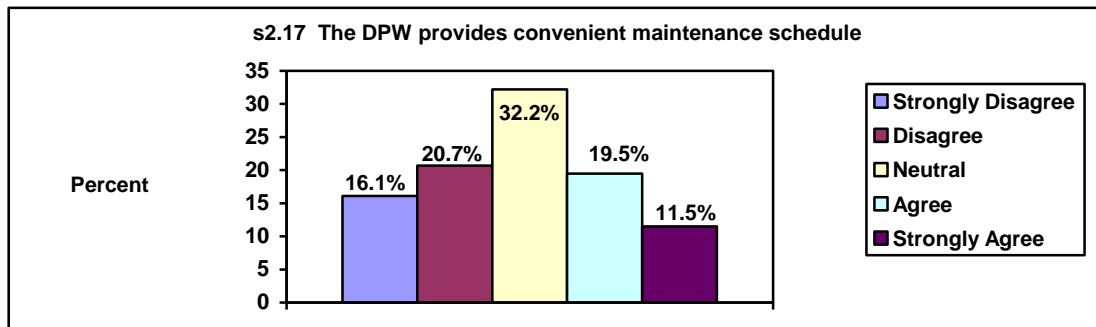


Figure 4.38: Graphical representation of the results of the Statement: The DPW provides convenient maintenance schedule

The aforementioned figure's results reveal different opinions from the respondents whether DPW provides convenient maintenance schedule to the tenants. Almost 16, 1% (14) was strongly disagreeing, over 20.7% (18) respondents were Disagreeing with the statement, majority of the respondents at 32.2% (28) had Neutral opinion and not too sure of DPW's provision of convenient maintenance schedule, 19.5% (17) respondents were Agreeing, and least respondents at 11.5% (10) respondents were Strongly Disagreeing.

Below is the graphical presentation: The DPW provides frequent maintenance service by artisans (**Code: s2.18**)

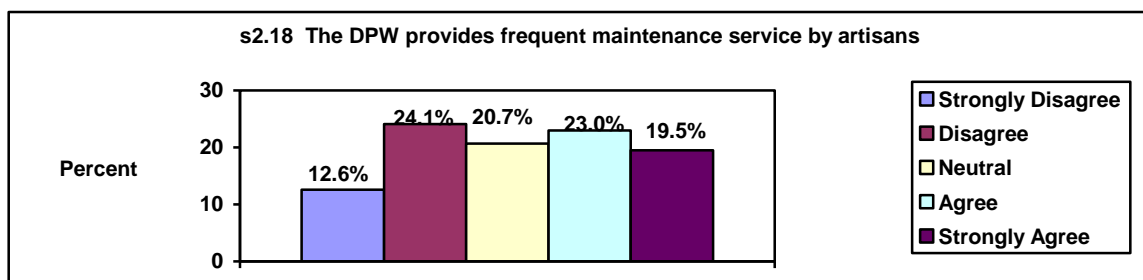


Figure 4.39: Graphical representation of the results of the Statement: The DPW provides frequent maintenance service by artisans

In this part the study intends to examine whether the DPW definitely provides frequent maintenance service by artisans. The graph above demonstrates the perceptions of the respondents participated in the project with regard to the frequent maintenance service provision by DPW's artisans.

The above figure reveals that 12,6% (11) respondents Strongly Disagree, over

24.1% (21) Disagree, almost 20.7% (18) Neutral, over 23.0% (20) respondents signifies high proportion of Agreeing that DPW provides variety and quality equipments, almost 19.5% (17) Strongly Disagree.

Below is the graphical representation: The DPW has spontaneous care & concern for your needs **(Code: s2.19)**

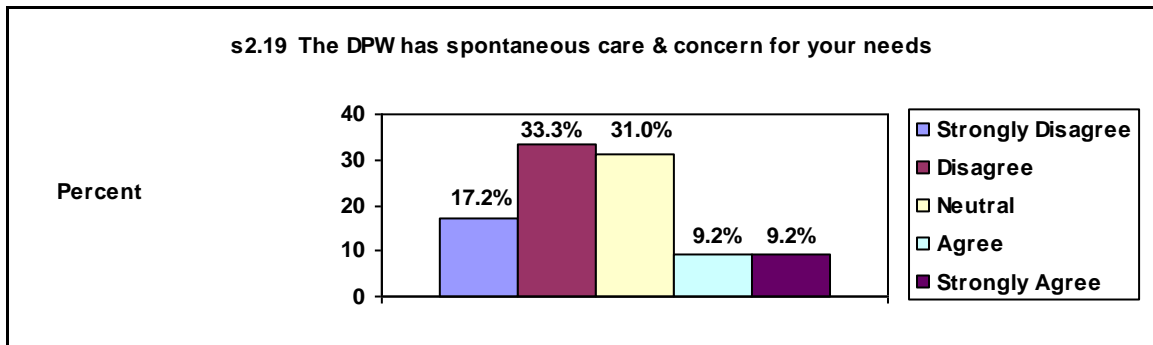


Figure 4.40: Graphical representation of the results of the Statement: The DPW has spontaneous care & concern for your needs

The above figure reveals the main organizational function of each tenant with regard to the spontaneous care and concern for the tenant's needs the DPW provides.

The study reveals 17.2% (15) of the respondents were Strongly Disagreeing, almost 33.3% (29) of the respondents signify that the majority were Disagreeing and probably not satisfied with the services rendered to them which do not meet their needs, over 31.0% (27), almost 9.2% (8) respondents were Agreeing, over 9.2% (8), and almost 9.2% (8) respondents indicated that they Strongly Agreed with the above statement s2.19.

Below is the graphical representation: The DPW has a sound loyalty programme to recognize you as a frequent customer (**Code: s2.20**)

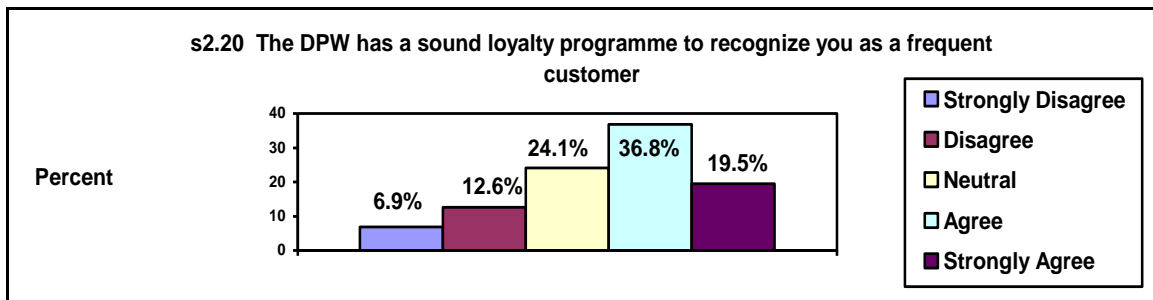


Figure 4.41: Graphical representation of the results of the Statement: The DPW has a sound loyalty programme to recognize you as a frequent customer

In this section the research is trying to determine whether DPW provides has a loyalty programme to recognize tenants as a frequent customer.

Above is the figure that reveals perceptions of participated respondents in this project, have expressed 6.9% (6) Strongly Disagree, over 12.6% (11) “Disagree”, 24.1% (21) respondents remained Neutral and adamant to reveal what they feel about the sound loyalty programme they think they receive from DPW, majority of respondents were over 36.8% (32) Strongly Agree towards study statement s2.20, 19.5% (17) respondents Strongly Disagree with the statement s2.20.

4.1.2 Statistical Analysis of the Questionnaire

This section presents data analysis of statements s2.1 to s2.20 using the statistical measure of mean median, mode, standard deviation, and variance, range, minimum and maximum. Below is a table indicating the coding of the responses in the questionnaires

Table 4.1.1: Coding of the responses in the questionnaires

Code	Comment
1	Strongly Disagree
2	Disagree
3	Neutral
4	Agree
5	Strongly Agree

The above table was developed to rate the respondents' expectation level based on a 5 point Likert scale whereby; 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree was employed in order to record the perceptions of respondents on service quality perspective.

4.2 Measure of Location s2.1 to s2.5:

Table 4.1.2: Measure of Location s2.1 to s2.5: Central Tendency Statistics I,

		s2.1	s2.2	s2.3	s2.4	s2.5
N	Valid	87	87	86	86	86
	Missing	0	0	1	1	1
Mean		3.00	3.00	3.00	3.00	3.00
Median		3.00	3.00	3.00	3.00	3.00
Mode		3	3	4	3	3
Std. Deviation		1.376	1.146	1.168	1.345	1.294
Variance		1.892	1.312	1.364	1.808	1.674
Range		4	4	4	4	4
Minimum		1	1	1	1	1
Maximum		5	5	5	5	5

The above table reveals central tendency statistics results of the research statements s2.1 to s2.5, which is analyzed based on the measurement scale code of the responses interpreted as in Table 4.5.1 above.

4.2.1 The Mean

The research statements s2.1, s2.2, s2.3, s2.4, s2.5 have a mean value of 3.00, this reveal the respondents participated in this project have articulated average perception is neutral towards the above mentioned research statements.

4.2.3 The Median

The research statements s2.1, s2.2, s2.3, s2.4, s2.5 have median value is 3.00, this indicates neutral is the median perception of respondent.

4.2.4 The Mode

The research statements s2.1, s2.2, s2.4, s2.5 have mode value 3.00, this indicates neutral is mode perception of respondents. The research statement S2.3 has mode value 4.00, which indicates Agree as a mode of respondent's perception.

4.2.5 The Standard Deviation

The research statements s2.1, s2.2, s2.3, s2.4, s2.5 have standard deviation from 1.146 to 1.376, it reveals these variables have difference in respondent's perception.

4.2.6 Variance

The research statements s2.1, s2.2, s2.3, s2.4, s2.5 have variance from 1.312 to 1.892, it reveals these variables have variation in respondent's perception.

4.2.7 Range

The research statements s2.1, s2.2, s2.3, s2.4, s2.5 have range value 4, it indicates these variables have difference in respondent's perceptions and respondents have expressed all types of opinions towards study questions.

4.2.8 Minimum

The research statements s2.1, s2.2, s2.3, s2.4, s2.5 have minimum value 1 and it indicates respondents have articulated minimum perception is Strongly Disagree.

4.2.9 Maximum

The research statements s2.1, s2.2, s2.3, s2.4, s2.5 have maximum value 5 and it indicates respondents have articulated maximum perception is strongly agree.

4.3 Measure of Location s2.6 to s2.10

Table 4.1.3: Central Tendency Statistics II

		s2.6	s2.7	s2.8	s2.9	s2.10
N	Valid	86	87	87	86	87
	Missing	1	0	0	1	0
Mean		3.00	3.00	3.00	3.00	3.00
Median		3.00	3.00	3.00	3.00	3.00
Mode		4	3	3	3	3
Std. Deviation		1.374	1.303	1.289	1.163	1.206
Variance		1.887	1.698	1.662	1.352	1.454
Range		4	4	4	4	4
Minimum		1	1	1	1	1
Maximum		5	5	5	5	5

Using the measurement scale code interpreted in Table 4.5.1 above the statistical results as illustrated in Table 4.6.1.

4.3.1 The Mean

The research statements s2.6, s2.7, s2.8, s2.9, s2.10 have a mean value of 3.00, which reveals that the respondents that participated in this project have articulated average perception that is neutral towards the above mentioned research statements.

4.3.2 The Median

The research statements s2.6, s2.7, s2.8, s2.9, s2.10 have median value is 3.00, this indicates neutral is the median perception of respondent.

4.3.3 The Mode

The research statements s2.7, s2.8, s2.9, s2.10 have mode value 3.00, this indicates neutral is mode perception of respondents. The research statement S2.6 has mode value 4.00, this indicates agree is mode perception of respondent.

4.3.4 The Standard Deviation

The research statements s2.6, s2.7, s2.8, s2.9, s2.10 have standard deviation from 1.163 to 1.374, it reveals these variables have difference in respondent's perception.

4.3.5 Variance

The research statements s2.6, s2.7, s2.8, s2.9, s2.10 have variance from 1.352 to 1.887, it reveals these variables have variation in respondent's perception.

4.3.6 Range

The research statements s2.6, s2.7, s2.8, s2.9, s2.10 have range value 4, it indicates these variables have difference in respondent's perceptions and respondents have expressed all types of opinions towards study questions.

4.3.7 Minimum

The research statements s2.6, s2.7, s2.8, s2.9, s2.10 have minimum value 1 and it indicates respondents have articulated minimum perception by strongly disagree.

4.3.8 Maximum

The research statements s2.6, s2.7, s2.8, s2.9, s2.10 have maximum value 5 and it indicates respondents have articulated maximum perception by strongly agree.

4.4 Measuring Location in Research Statement s2.11 to s2.15

Table 4.1.4: Central Tendency Statistics III

		s2.11	s2.12	s2.13	s2.14	s2.15
N	Valid	87	87	87	87	87
	Missing	0	0	0	0	0
Mean		3.00	3.00	3.00	3.00	3.00
Median		3.00	3.00	3.00	3.00	3.00
Mode		3	3	3	3	4
Std. Deviation		1.172	1.317	1.179	1.178	1.176
Variance		1.373	1.733	1.391	1.387	1.384
Range		4	4	4	4	4
Minimum		1	1	1	1	1
Maximum		5	5	5	5	5

Using the measurement scale code interpreted in table 4.5.1 above the statistical results as illustrated in table 4.7.1.

4.4.1 The Mean

The research statements s2.11, s2.12, s2.13, s2.14, s2.15 have a mean value of 3.00, this reveals the respondents participated in this project have articulated average perception as neutral towards the above mentioned research statements.

4.4.2 The Median

The research statements s2.11, s2.12, s2.13, s2.14, s2.15 have median value of 3.00; this indicates neutral is the median perception of respondent.

4.4.3 The Mode

The research statements s2.11, s2.12, s2.13, s2.14 have mode value 3.00, this indicates neutral is mode perception of respondents. The research statement S2.15 has mode value of 4.00; this indicates agree is mode perception of respondent.

4.4.4 The Standard Deviation

The research statements s2.11, s2.12, s2.13, s2.14, s2.15 have standard deviation from 1.172 to 1.317; it reveals these variables have difference in respondent's perception.

4.4.5 Variance

The research statements s2.11, s2.12, s2.13, s2.14, s2.15 have variance from 1.373 to 1.391; it reveals these variables have variation in respondent's perception.

4.4.6 Range

The research statements s2.11, s2.12, s2.138, s2.14, s2.15 have a range value of 4, it indicates these variables have difference in respondent's perceptions and respondents have expressed all types of opinions towards study questions.

4.4.7 Minimum

The research statements s2.11, s2.12, s2.13, s2.14, s2.15 have a minimum value of 1 and it indicates respondents have articulated minimum perception by strongly disagree.

4.4.8 Maximum

The research statements s2.11, s2.12, s2.13, s2.14, s2.15 have maximum value 5 and it indicates respondents have articulated maximum perception by strongly agree.

4.5 Measuring Location in Research Statement s2.16 to s2.20

Using the measurement scale code interpreted in table 4.5.1 above, the statistical results are as follows;

Table 4.1.5: Central Tendency Statistics IV

		s2.16	s2.17	s2.18	s2.19	s2.20
N	Valid	87	87	87	87	87
	Missing	0	0	0	0	0
Mean		3.00	3.00	3.00	3.00	4.00
Median		3.00	3.00	3.00	2.00	4.00
Mode		3	3	2	2	4
Std. Deviation		1.147	1.230	1.328	1.156	1.150
Variance		1.315	1.512	1.763	1.336	1.323
Range		4	4	4	4	4
Minimum		1	1	1	1	1
Maximum		5	5	5	5	5

4.5.1 The Mean

The research statements s2.16, s2.17, s2.18, s2.19 have a mean value of 3.00, this reveals the respondents participated in this project have articulated average perception is neutral towards the above mentioned research statements. The research statement S2.20 has mean value 4.00, this indicates "agree" as a mean perception of respondent.

4.5.2 The Median

The research statements s2.16, s2.17, s2.18 have median value is 3.00, this indicates neutral is the median perception of respondents. The research statement s2.19 has median value 2.00; this indicates disagree by median perception of respondent. The research statement s2.20 has median value 4.00, this indicates agree is median perception of respondent.

4.5.3 The Mode

The research statements s2.16, s2.17 have a mode value of 3.00, this indicates neutral by mode perception of respondents. The research statement s2.18, s2.19 has mode value 2.00, this indicates disagree is mode perception of respondent. The research statement s2.20 has mode values 4.00, this indicates agree is mode perception of respondent.

4.5.4 The Standard Deviation

The research statements s2.16, s2.17, s2.18, s2.19, s2.20 have standard deviation from 1.147 to 1.328, it reveals these variables have difference in respondent's perception.

4.5.5 Variance

The research statements s2.16, s2.17, s2.18, s2.19, s2.20 have variance from 1.315 to 1.763, it reveals these variables have variation in respondent's perception.

4.5.6 Range

The research statements s2.16, s2.17, s2.18, s2.19, s2.20 have range value 4, it indicates these variables have difference in respondent's perceptions and respondents have expressed all types of opinions towards study questions.

4.5.7 Minimum

The research statements s2.16, s2.17, s2.18, s2.19, s2.20 have a minimum value of 1 and it indicates respondents have articulated minimum perception by strongly disagree.

4.5.8 Maximum

The research statements s2.16, s2.17, s2.18, s2.19, s2.20 have maximum value 5 and it indicates respondents have articulated maximum perception is strongly agree.

4.5.9 The Non Responsiveness to Questionnaires

The respondent could not provide information on research statements s2.3, s2.4, s2.5, s2.6, s2.9. The missing information will not be considered for the purposes of the research.

CHAPTER FIVE

DATA ANALYSIS AND INTERPRETATION

5.1 Introduction

Thus far the study has generated descriptive statistical data that is subjected to detailed and careful interpretation, leading to the constructive responses to the research questions posed earlier in the report. The data analysis will facilitate the research questions under the title '*An evaluation of the maintenance on government properties in Mpumalanga Province: A service quality perspective*'.

In this Chapter, the author presents the discussion integrating the knowledge garnered from the literature reviewed and in the process contextualizes the findings. The chapter is structured, based on the research variables in Table 3.5, and is as follows: First, it presents the discussions on the dependent variables, most of which are the Gaps identified in the SERVQUAL technique. Second, it presents the discussion on the independent variables namely quality, maintenance, which can be carried out under strategic quality assurance and management. Third, a closer look at the distribution and dispersion of the responses collected with a view to identify the threats that will validate accuracy and possible biasness of the research or the field workers.

Based on the discussion, the conclusion with regard to the research is drawn and recommendations based on the findings are made.

5.2 Discussions on the dependent Variables

The dependent variables identified for discussion are: maintenance programme; customer perceptions -1, 2, 3, 4, 5 and 6. The discussion is limited to the variables not because these are the most important, but are considered valuable to the modeling of the scenario pertaining to the implementation of the maintenance programme in Mpumalanga Province and the author deemed this variable as key to understand the human perception towards the programme.

5.2.1 Maintenance Programme and the Perceptions

In the literature review, the first Gap identified that needs to be addressed, which is key in the roll out of the programme is '**Gap 1: Customer's expectations versus management perceptions**'. Parasuraman (1995) in the GAPS Model of Service Quality, noted the mismatch between customer's expectations against management perceptions as the first point of failure to deliver the programme from a quality perspective. Starting with customer's expectations (refer to Table 4.4.7), the highest recording is category of customers that are unsure (Neutral) at dispersion of 29.9%, those that Disagree are 20.7% and those that are Strongly Disagreeing being 18.4% meaning that a cumulative percentage of dispersion at 69% entails that the perception against the programme is higher. On the other hand, the management of the Mpumalanga Province deems the programme as strategic in the management of immovable assets in the province.

A further look at the customers' perceptions in (Tables 4.7.3 and 4.7.4) indicate a similar trend that most customers are unsure (Neutral), but this is against a higher percentage of the customers that strongly disagree that the DPW provides reliable maintenance. This may be confirmed by the current situation within the Mpumalanga Provincial Government where the Properties and Facilities components in the Facilities Management sub-directorate under the Directorate of Professional Services and Programme Management is operating with skeleton staff and in the process of filling in those vacancies hoping to positively impact towards the service quality. There are also other problems such as:

- Line of communication is still problematic and as a result had experienced the shortage of staff who can execute the property portfolio with an informed decision;
- Targets are not easily met as reflected in the strategic plan of DPW, equally compounded by the fact that DPW lacks the marketing research skills and are not orientated towards research because of budget constraints;
- DPW therefore lacks such above mentioned instrument, model, or best practice to ascertain perceived gaps between the customers' expectations and perceptions of the service offered to them;

- Service quality is not taken into consideration with regard to the maintenance of government properties.

From the service quality perspective and given the response that most customers do not consider the maintenance programme to be reliable whilst management are proceeding to implement the programme without considering the customer perceptions, one may conclude that GAP 1 does exist. It is therefore in the spirit of this research that the problems associated with the GAPS should be addressed to ensure enhancement of the effectiveness of the programme.

5.2.2 Customer's Perceptions and the Physical Conditions of the Properties

The concept of quality and the continuous improvement as defined in the first part of the report directly motivates for acceptable physical conditions of the properties on which these concepts are applied. Although the definitions may be contested as not being comprehensive, the limitation not directly addressed in this study; In this report, the basic understanding of quality includes the properties' complying to the Occupation Health and Safety Act, Planning, Building and Public Health regulations and any other relevant legislature.

The assumption made is that customer's perceptions also include that the properties that such customers occupy meet these norms. From Table 4.1.4, the dependent variable: Customer's Perceptions and the Physical Conditions of the Properties link to the item surveyed; first, the variety and choices of properties. One supposes that a poorly maintained property portfolio may not provide the desired variety and choices. With reference to (Table 4.9.20), it is shown that 21.7% of the sample strongly disagreed that DPW provides the choices and variety while 20.5% only disagreed and 22.9% were neutral.

The scenario painted here, is that without this variety, customers may have no choice, but to take even those property in poor and deplorable condition. Second, customers when asked about convenience maintenance schedules 16.3% and 19.8% strongly disagreed and disagreed respectively while 32.6% are neutral

(refer to Table 4.9.13). This means that minus convenient schedules maintenance is sporadic and may only be emergence type of maintenance. Looking back at the literature review, it was noted that maintenance is ongoing coupling the emergency maintenance together with the preventive maintenance. Without ongoing improvement, one may argue that the physical conditions of such property may deteriorate and the customers' perceptions may be justified as is the case in this study.

All the analyses of the dependent variables (customers' perceptions against identified factors (refer to Table 4.1.4) show that most respondents disagreed or even strongly disagreed. Only between 5-20% agreed or strongly agreed to items on survey. Therefore, a programme such as the maintenance may require incorporating the customers' perception in the implementation strategies to ensure that the property market requisites are taken care of. With DPW there is an element of willingness to assist customers in addressing their needs (refer to Table 4.8.6) and yet budget constraint prevents the regions from meeting their customer's needs. Currently the regions generate maintenance works orders when requests are received from the customers. Programme financial needs, status and other requirements need to be aligned for the programme to run effectively.

5.3 Discussions on the Independent Variables

The purpose of the study was to evaluate the maintenance of the provincial government properties from service quality perspective. The researcher opted for a quantitative approach and utilized questionnaires to collect data. The key independent variables identified include quality and maintenance. This section of the chapter is a discussion on the two variables a concept and a process respectively. These are independent of each other, for example the process of maintaining properties can be of quality outcome only if strategic measures are put in place to control the process and ensure that intended outcomes are achieved. Whereas quality, in itself as a concept, is the agreed upon standard of outcome which delivers the desired satisfaction.

5.3.1 Quality and SERVQUAL

As discussed in literature review part of the report, Parasuraman, et.al.,(1988) developed a service quality instrument called SERVQUAL, with 5 key dimensions of service quality namely: Tangibles, Reliability, Responsiveness, Assurance, Empathy, technical and Image; the details are provided above. For quality to be assured and ensured, there has to be first, the tangibles, the physical elements of service such as equipment and condition of the properties rented and occupied; meaning that if these tangible are in good working condition, well maintained as required, then the SERVQUAL grading will be allocated.

Tables 4.6.9 and 4.7.0 allude to the tangibles, and the customers were asked whether DPW provides quality equipments and properties, 31.3% and 19.8% agreed that this is the case. In the same token, 12.8% and 20.9% customers in the sample strongly disagreed. The tangibles give a true physical aspect for review of the programme. In Mpumalanga, one can posit that the programme is implemented and buildings are being maintained, but not meeting the customers' needs and perception of quality.

Second key aspect of the quality as construed in SERVQUAL is reliability (ability to perform service dependably and accurately) as the most important feature. In survey the response that "The DPW provides property services consistently" has a constant statistical distribution (means) factor with a central position throughout the 19 and 20 attributes. The position, based on the analysis, is that the tenants of government property in the province are satisfied that the current maintenance programme and its strategies are reliable. But one quickly notices that reliability is also dependent on the knowledge and skill pool available in the programme, a case in point for lower programme effectiveness.

Third, like all the other service attributes: Responsiveness- (Willingness to help tenants and provides prompt service); Assurance- (Knowledge and courtesy); Empathy- (Caring and individualized attention) attracted widely distributed responses similar to the ones discussed in the first and second paragraphs. The

influence of these attributes on the outcome of the programme may be articulated and best practices documented for improvement of the programme.

5.3.2 The Concept of Maintenance

Identified as independent variable, maintenance is a concept that involves controlled process for continuous improvement of the physical appearance of the properties and the environments such properties provides to the tenants. In the DPW, the concept of property maintenance, be it the preventive maintenance or emergence maintenance is well understood and documents to guide the implementers are available.

However, the challenge remains within the budgeting process and the allocation made available to ensure the implementation of the programme is at the lowest, all the years. This is complicated; if one narrates about the huge backlog on maintenance of government properties, the DPW management becomes daunted in that regard. The other challenges include the shortage of management skills for the programme and the artisans' skills, which are not readily on the skills market especially for plumbing, mechanical and electrical fields.

Looking at the maintenance programme, its processes and sustainability, it becomes clearer that customers' perceptions, needs and lifestyles should be considered starting from the time of policy formulation, up to the time of implementing the specific projects. The concept of service quality and attributes must be embraced and also total quality approach must be factored into the programme.

5.3.2.1 Maintenance and TQM in the Public Sector

In the literature review, it was noted that Brown and Bond (1995) indicated that Gap 1, Gap 2, Gap 3, Gap 4, Gap 6 and Gap 7) are gaps within functions of the way in which service is delivered. This also applies to the programme, the strategies and the process meaning that service delivery, in this context, it should be looked at in the holistic manner. Considering the Gaps in the SERVQUAL concept, one sees that the key aspects identified in each of the Gaps are identical

to the key issues considered whenever TQM is applied both in private and public sectors and one such aspects is the perceptions of the stakeholders. Although the maintenance programme in Mpumalanga was not mooted within the stipulations of TQM, a shortcoming that is evident in the responses given by the customers, management and employees within the programme, application of TQM principles within the programme would improve the delivery and the perceptions of the stakeholders. Indeed there are challenges in implementing the TQM in public enterprise unlike in the private. Some of the challenges identified include:

Table 5.1: The challenges to implementation of TQM in Public Enterprise,

- Any product or service offered to a certain kind of end-user is determined politically as a specific and restricted task of certain public organizations;
- That functions of allocating products and services are handled completely or partly by the public organization rather than by the customers;
- Lack of market system price mechanism for Public organization had a negative impact towards the allocation function necessary in public service;
- TQM in public sector denotes to transform 'quality' from a matter of political standards and/or professional standards into quality understood by end-users satisfaction;
- Traditional economic control; political powers, group influences; and organizational cultures.

Apart from the Gaps identified within the concept of service quality and the review technique of SERVQUAL, the challenges above may negatively impact on the service delivery, if not addressed, and may be the hidden drivers behind the systematic setup of the programme, its strategies and processes. As a result the programme is more conforming to public sector enterprise procedures and lacks strategy and transformation agenda. The transformation agenda, in this case, is a deliberate move towards fusing the attributes of best practice on TQM as applied in private sector and transforming the operation setup of the DPW with regards to maintenance. For example, DPW may set up an account for maintenance that could be capitalized through the revenue from rentals and advocate for strategic funding for maintenance that separately managed away from the infrastructure budget.

Further observation is that the challenges above need to be addressed, as indicated in (Table 4.9.36), most of it, cannot be resolved without amending the system of the enterprise or DPW- Directorate in charge of maintenance in question. The organizational structures, and culture of public sector and Provincial Departments in particular cannot be re-organized overnight and re-organization is a lengthy process itself with a lot of political overtone. It is also fundamental that the frontline team is abreast with the Batho Pele principles (People First) and lead in implementing such principles alongside with other members in the programme.

5.4 Discussions on the Reliability, Validity of the Research Finding

This discussion is based on the analysis carried out on the research findings in Chapter 4, specifically the measure of location (mean, median, mode, standard deviation, and variances), reliability (using the alpha and t-tests), the ANOVA and Correlations. The idea behind this statistical analysis is to ensure the indepth understanding of the statistical findings and inference to the research questions and its research objectives.

5.4.1 Discussion on the Described Data

The graphical presentations highlight key variables that are considered in the research such as age, gender, marital status, which is referred to as control variables. The reasons for declaring these control variables include the study need to have an understanding of the responses aligned with these variables and see the degree of biasness.

For example, the respondents that participated had a demographical distribution of 50.6% male to 49.4% female; the difference of 1.2% is within the set variance for this study. The age, gender and marital status have less influence on the responses received from the respondent. But, the graphical presentation shows that further market research may allow the planners to align the programme to the variable: age, gender and marital status.

5.4.2 Discussion on the Distribution

Using the strongly agree and strong disagree continuum, the descriptive statistics review a pattern of distribution within the responses received. The characteristic of the population yielded a mean, median, mode of 3.00 on the research statements s2.1, s2.2, s2.3, s2.4, s2.5. Interpreting this result, the balance point of the responses received, based on the continuum, is 3.00, a point that may be equal to the neutral point on the response continuum. These statistical points show us the position and frequency meaning the responses to the question statement is 3.00 times likely to be neutral. Only the research statement S2.3 has a mode value of 4.00, this indicates agree is mode perception of respondent. The deviation of one (1) out of six (6) show the representation of the sample and confirms the validity of the sample design.

The research statements s2.1, s2.2, s2.3, s2.4, s2.5 have standard deviation from 1.146 to 1.376, the variance from 1.312 to 1.892, the range value 4. The standard deviation and the variance reveal that these variables have variation in respondent's perception and that respondents have expressed all types of opinions towards study questions. The central tendency observed gives an indication that further statistical power or investigation is needed to avoid the threats to statistical conclusion validity that may come out of the possible violation of the statistical assumption (Creswell, 2003).

Having looked at the responsiveness, it is obvious that one needs to look at the non-responsiveness. The research statements s2.11, s2.12, s2.13, s2.14, s2.15 have mean value is 3.00, the median value is 3.00, the mode value 3.00, this indicates neutral is mode perception of respondents. The research statements s2.11, s2.12, s2.13, s2.14, s2.15 have standard deviation from 1.172 to 1.317, the variance from 1.373 to 1.391, the range value 4, the minimum value 1. This shows similar distribution to the analysis on the responses. What does this scenario entail? Given the two seemingly symmetric distribution, it means that the mean, median and mode should be used to represent the data, unlike in the highly or negatively skewed (Lind, Marchal, and Wathen, 2005).

5.4.3 Discussion on Data for Reliability, Dispersion and Correlation

Applying the descriptive statistical techniques mentioned earlier in this study, not because these are the best, but are more familiar. The Cronbach Alpha Test (Reliability Test), T test, ANOVA, Correlation and Chi Squared Test and result of the data analysis, their implication of this study is discussed below.

5.4.3.1. Cronbach Alpha Test (Reliability Test)

As indicated earlier, Cronbach model is used to determine the reliability of the measurement scale of service quality after the research. It has two result options, if Cronbach Alpha value is between 0.4 to 0.7 the research result indicates of medium internal consistency and reliability. On the other hand, If Cronbach Alpha value is between 0.7 to 1.0, indicates of High or good internal consistency and reliability.

Reliability analysis of the questionnaire statements of Chapter 4 (Table 4.1.6) reveals that Cronbach's alpha value is 0.489 and this confirms the consistency and reliability.

5.4.3.2 Discussing the T- Test

Based on the rule of Interpretation for the T-Test set up in the Chapter 4 (in Table 4.1.7), the T-test results, the **p** significance values are 0.316, 0.461, 0.078, 0.096 for statements s2.1, s2.3, s2.4, s2.5 are above **0.05**. The result reveals statistically that there is **NO significance difference** between gender groups (males, females) perceptions towards the above research statements. This means that males and females respondents gave similar responses without bias due to gender. Using the 0.05 significance level and a two tail tests, the two hypotheses are evaluated as follows:

H₀: p =0 (the correlation in statements s2.1, s2.3, s2.4, s2.5 to the gender groups is zero) (null hypothesis);

H₁: p ≠0 (the correlation in statements s2.1, s2.3, s2.4, s2.5 to the gender groups is different from zero) (alternative hypothesis);

The null hypothesis is not rejected, but again further investigations are needed to see the correlation. In all other analysis the correlation reviews no significance in

relationships between the responses and the gender, age and marital status. Without such correlation, the author concludes that the association relationship and not the cause relationship are in existence (Lind, Marchal, and Wathen, 2005); and that no change in control variable (gender, age and marital status) causes change in the statements s2.1, s2.3, s2.4, s2.5.

5.4.3.3 Discussing the ANOVA Test

As noted in Chapter 3, there are two population samples, the tenants and the DPW officials. Lind, Marchal, and Wathen (2005) observed that for comparison of several population means, use of ANOVA is appropriate. Therefore, ANOVA tests determining variances are done on statements and grouping namely: age, gender marital status and level of education. As stated earlier on the interpretation of the results from this technique is in Chapter 4; but significant is the rule that If **p** value is less than or equal **$p \leq 0.05$** , statistically there is significance difference between groups' opinions. If **p** value is greater than **$p > 0.05$** , statistically there is **NO** significance difference between groups' opinions.

The results reveal there is **no statistically significance difference** in perceptions of different age groups respondents towards the research statements because these statements **p** significance values are 0.794, 0.683, 0.762, 0.761, 0.552 and above **0.05**. This means different age groups respondents are not influenced in their responses by the age, gender, education, marital and their needs are the same (refer to Table 4.2.1; 4.2.2; 4.2.3; 4.2.4; 4.2.5; 4.2.6; and 4.2.7). Relating this to the SERVQUAL and the seven identified Gaps, the control variables are not key attributes in the Gaps. But it is evident that the control variables can play a role in the focusing the strategic goals of the programme. For example, property that has more married tenants with families may need a more vandal proof specifications of the materials and frequent checks on the safety fittings because the children may not be aloof to vandalism.

5.4.3.4 Discussion on the Data Correlations

The full description of this statistical technique is given the preceding chapter, however, there are six aspects (rules) governing the application and interpretation

of the results. The coefficient of correlation, according to Lind, Marchal, and Wathen, (2005) measures or describes the strength of the relationship between two sets of interval-scaled or ratio-scaled variables. In Chapter 3, the relationships are established; hence this section looks at only strong relationships and discusses the implication of the relationships.

Firstly, there is a strong relationship of **statement s2.2 (The DPW has modern and clean properties (Code: s2.2) with statement s2.9 (The DPW employees provide prompt response to your request or complaint (Code: s2.9) has p value 0.031 and this p value is less than 0.05 and it indicates the statement s2.2 with statement s2.9 have statistically significance correlation. The +Ve sign in front of s2.9 indicates positive correlation. Pearson product correlation coefficient r value 0.232 indicates moderate correlation between them.** This is likely because if there is promptness in rendering services, the properties may remain clean, but the likelihood of having modern depends on replacement of old and desolate building fittings; meaning that a preventive maintenance programme coupled with a reliable emergence maintenance programme will facilitate the modern status.

Secondly, the relationship of **statement s2.5 (The DPW performs the service quality for the first time (Code: s2.5) with statements s2.6 (The DPW provides property services consistently (Code: s2.6) and s2.9 (The DPW employees provide prompt response to your request or complaint (Code: s2.9), both statements has p values 0.010, 0.033 respectively and these p values are less than 0.05 and it indicates the statement s2.5 with statements s2.6, s2.9 have statistically significance correlation.** The +Ve sign in front of s2.9 indicates positive correlation and -Ve sign in front of s2.6 indicates negative correlation, which reflect the Pearson product coefficient of correlation (**r**) values 0.279, 0.231 respectively indicating the moderate correlation between them. This is true of the maintenance programme under the Mpumalanga provincial government; the emergence maintenance approach renders prompt service just to fix the problematic elements, but these are unable to render consistent service, which can only be planned for and implemented under the preventive maintenance approach.

Thirdly, the relationship of statement s2.1 (**The DPW Provides world class properties (Code: s2.1)**) with statements s2.11 (**The DPW understands your specific needs (Code: s2.11)**), has **p** values 0.017 and this value is above **0.05** and it indicates the statement s2.1 with statements s2.11 have **statistically significance correlation**. The -Ve sign in front of s2.11 indicates negative correlation. Pearson product correlation coefficient **r** value 0.256 indicates moderate correlation between them. Although the correlation is not strong, one argues that if DPW understands the specific needs of its tenants, then, DPW should be able to development and maintain property portfolio to best practices, here in, referred to as 'world class'. The maintenance programme is not currently tailored to mobilize tenants' specific needs and factoring such contributions into the strategy and process.

Fourthly, the relationship of statement p2.5 (**The DPW performs the service quality for the first time (Code: s2.5)**) with statements s2.12 (**The DPW keeps you informed about when services will be performed (Code: s2.12)**) and s2.15 (**The DPW employees are knowledgeable to answer customer questions (Code: s2.15)**) has **p** values 0.043, and 0.004 and these **p** values are less than **0.05** and it indicates the statement s2.5 with statements s2.12, s2.15, **have statistically significant correlation**. The +Ve sign in front of s2.12, s2.15 indicate positive correlation. Pearson product correlation coefficient **r** values 0.219, 0.309 indicates moderate correlation between them. The relationship does exist, but in practice, as indicated that the maintenance at the DPW is more of emergence than preventive maintenance, tenants are informed although already aware because tenants are the ones to report the faults. If preventive maintenance is put in place and well funded, this strong relationship can be utilized for the benefit of the programme.

Fifthly, the relationship of statement s2.1 (**The DPW Provides world class properties (Code: s2.1)**) with statement s2.17 (**The DPW provides remedial procedures for emergency repairs (Code: s2.7)**) has **p** value 0.009 and this **p** value is less than **0.05** and it indicates the statement s2.1 with statement s2.17 **have statistically significance correlation**. The -Ve sign in front of s2.17 indicates negative correlation. Pearson product correlation coefficient **r** value

0.279 indicates moderate correlation between them. Currently, the province has a major backlog on preventive maintenance, but has strived to keep the emergency programme running, thus, the scenario although not the best practice has kept most of the building habitable and compliant with the Occupation Health and Safety Act. Again, one sees that the correlation of these variables also influence the perception of the tenants against the programme and even the seriousness of the politicians and government regime in power.

Sixthly, the relationship of statement p2.3 (**The DPW provides variety and quality equipments (Code: s2.3)**) with statements s2.18 (**The DPW provides frequent maintenance service by artisans (Code: s2.18)**) has **p** values 0.045, the **p** value is less than **0.05** and it indicates the statement s2.3 with statements s2.18 **have statistically significance correlation**. The +Ve sign in front of s2.18 indicates positive correlation. Pearson product correlation coefficient **r** values 0.217, indicates moderate correlation between them. As mentioned earlier on the province is driven by the emergence approach and currently planning to move into preventive maintenance. Currently, artisans respond to faults reported by tenants as well a scheduled maintenance of life saving machines. But the relationship highlighted here has a cause relationship because without providing frequent maintenance service by artisans, the DPW will not maintain reliable and quality equipment.

Seventhly, the relationship between statement p2.8 (**The DPW provides reliable maintenance (Code: s2.8)**) and statement s2.12 (**The DPW keeps you informed about when services will be performed (Code: s2.12)**) has **p** value 0.028 and this **p** value is less than **0.05** and it indicates the statement s2.8 with statement s2.12 **have statistically significance correlation**. The +Ve sign in front of s2.12 indicates positive correlation. Pearson product correlation coefficient **r** value 0.236 indicates moderate correlation between them. In the Gaps, it was noted that communication is one of the key aspects of service quality. Reliable maintenance programme must be communicated to its beneficiaries, as stakeholders, as well as for their input, this relationship, therefore, is important for the effectiveness of the programme.

Eighthly, the study statement p2.10 (**The DPW provides prompt attention to your specific needs (Code: s2.10)**) with statements s2.11 (**The DPW understands your specific needs (Code: s2.11)**), and s2.12 (**The DPW keeps you informed about when services will be performed (Code: s2.12)**), has p values 0.012, 0.020, and these p values are less than **0.05** and it indicates the statement s2.10 with statements s2.11, s.12, **have statistically significant correlation**. The -Ve sign in front of s2.11, s2.12, indicate negative correlation.

Pearson product correlation coefficient r values 0.269, 0.249 indicate moderate correlation between them. Currently, DPW pays attention only to life saving needs and some emergence works, this not deliberate, but due to budget constraints. The DPW also understands its tenants' needs, but is unable to inform the tenants on when the services will be performed especially when a case is deemed to require preventive approach. On emergency work, yes tenants are informed.

Ninthly, the relation of statement p2.6 (**The DPW provides property services consistently (Code: s2.6)**) with statements s2.20 (**The DPW has a sound loyalty programme to recognize you as a frequent customer (Code: s2.20)**) has p values 0.032 the p value is less than **0.05** and it indicates the statement s2.6 with statement s2.20 **have statistically significance correlation**. The +Ve sign in front of s2.20 indicates positive correlation. Pearson product correlation coefficient r values 0.231 indicates moderate correlation between them. There is not a cause relationship, but one sees that a consistent and reliable services on itself can win loyalty, but lack of loyalty programme also has negative impact of the programme as well as the personal attitude towards government building infrastructure; hence the common saying 'its government property!'

Tenthly, the relation of statement **the DPW provides reliable maintenance (Code: s2.8)** with statements **the DPW employees are consistently courteous (Code: s2.16)**, **the DPW provides convenient maintenance schedule (Code: s2.17)**, **the DPW provides frequent maintenance service by artisans (Code: s2.18)**, **the DPW has spontaneous care & concern for your needs (Code: s2.19)**, **the DPW has a sound loyalty programme to recognize you as a frequent customer (Code: s2.20)** has p values 0.635, 0.333, 0.833, 0.438, 0.087

and these **p** values are above **0.05** and it indicates the statement s2.8 strong correlation with statements s2.16, s2.17, and moderate relationship with the rest of the variables. If we are to talk about TQM the relationship noted above should be utilized and made to feed into each others' gains.

Eleventhly, DPW pays specific attention and has spontaneous care & concern for your needs, but this attention must be institutionalized so that it becomes the culture of the organization and its image. The relation of statement p2.10 (**The DPW provides prompt attention to your specific needs (Code: s2.10)**) with statements s2.19 (**The DPW has spontaneous care and concern for your needs (Code: s2.19)**) has **p** values 0.000, and the **p** value is less than **0.05** and it indicates the statement s2.10 with statements s2.19 **have statistically significance correlation**. The +Ve sign in front of s2.19, indicates positive correlation. Pearson product correlation coefficient **r** values 0.424 indicate moderate correlation between them. It is these relationships that must be fostered into the TQM.

Twelfthly, the relationship of statement p2.11 (**The DPW understands your specific needs (Code: s2.11)**) with statements s2.19 (**The DPW has spontaneous care and concern for your needs (Code: s2.19)**), and s2.20 (**The DPW has a sound loyalty programme to recognize you as a frequent customer (Code: s2.20)**) have **p** values 0.001, 0.002, and the **p** values are less than **0.05** and it indicate the statement s2.19 with statements s2.20 **have statistically significance correlation**. The +Ve sign in front of s2.20, indicates positive correlation and the -Ve sign in front of s2.19, indicates negative correlation. Pearson product correlation coefficient **r** values 0.333, 0.355 indicate moderate correlation between them.

This is another relationship network that DPW must harness for the benefit of the programme. The argument is that the DPW understands the need for harnessing the relationship network, but has no strategies to enhance and implement embryonic relationships.

Thirteenthly, the relationship of statement p2.12 (**The DPW keeps you informed about when services will be performed (Code: s2.12)**) with statements s2.18 **The DPW provides frequent maintenance service by artisans (Code: s2.18)** has **p** values 0.050, and the **p** value is less than **0.05** and it indicates the statement s2.12 with statements s2.18 **have statistically significant correlation**. The +Ve sign in front of s2.18, indicates positive correlation. Pearson product correlation coefficient **r** value 0.210 indicates moderate correlation between them. TQM promotes scheduling of work and responsibilities as well as management of stakeholders that include suppliers and consumers. One cannot emphasize that the DPW needs to implement systematized approach to maintenance.

Fourteenthly, the relationship of statement p2.13 (**The DPW provides sincerity and patience in resolving your problems (Code: s2.13)**) with statements s2.16 (**The DPW employees are consistently courteous (Code: s2.16)**), s2.18 (**The DPW provides frequent maintenance service by artisans (Code: s2.18)**) have **p** values 0.021, 0.050, and the **p** values are less than **0.05** and it indicate the statement s2.16 with statements s2.18 **has statistically significant correlation**. The +Ve sign in front of s2.18, indicates positive correlation. Pearson product correlation coefficient **r** values 0.246, 0.211, indicate moderate correlation between them. Off course, the low budget and lack of skilled staff make it impossible for the DPW to maximize on the relationship identified here.

5.4.3.5. Data Analysis Using the Chi-Square Test

The Chi Square Tests' results are presented, in detail, in the Chapter 4, and the two rules of interpretation are If **p** value is less than or equal **$p \leq 0.05$** , there is statistically Significance relationship; If **p** value is greater than **$p > 0.05$** , there is **NO** statistically Significance relationship. The Chi-Square Test of Variables s1.1 (What type of property do you occupy *) and s1.2 (How is the physical appearance of the property). The Chi-square (χ) test result indicates **p** value is 0.019, which is below 0.05, this result reveals there is **statistically significance relationship** between statements s1.1: type of property occupation and s1.2: physical appearance, these two variables are associated, dependent on each other; and the physical

appearance affects the choice of property one opts to occupy, especially if there is a choice of property for the prospecting tenants. The Chi-Square Test of Variables s1.1; the Chi-Square Test of Variables s1.1 and s1.4; the Chi-Square Test of Variables s1.1 and s1.6; the Chi-Square Test of Variables s1.1 and s1.7; the Chi-Square Test of Variables s1.1 and s1.9; the Chi-Square Test of Variables s1.4 and s1.5 indicates **p** value is 0.063, which is above 0.05, this result reveals there is **no statistically significance relationship** between all the statements and the relationships. Despite the no statistically significance relationship, the analysis shows a scenario that could be used for the modeling of the programme as well evaluating and improving the programme; so that the programme can meet the service quality concept and deliver stakeholder satisfaction.

5.4.4 Discussion of the Data Analysis Based on Dispersion

As noted earlier in the report, the analysis of the data to determine the level of dispersion is done based on the gender group, age group, type of property and marital status. The assumptions are also noted above. Dispersion in detail gives statistics of data more detailed than mere location of the points given in mean, median and mode (Lind, Marchal, and Wathen, 2005). The percentage dispersion in the lower ranks are on the responses strong disagree and strongly agree, there are build up in percentage on disagree and agree responses. The neutral response attracted more respondents and this may be attributed to the fear of possible victimization or not knowing whether to support the research or not. The distribution, however, is better than anticipated by the author, and it reflects the efforts put into the study.

5.5 Conclusion

This chapter outlined the detailed analysis of the results obtained from the respondents' questionnaires. Chapter 6 concludes the study, by discussions, conclusion and makes recommendations for the DPW to make an informed decision on the maintenance of government properties: A service quality perspective.

CHAPTER SIX

Conclusion and Recommendations

6.1 Introduction

This chapter will summarise the major findings of this research. The study will make recommendations for contribution towards the development of interventions for DPW to enhance its service quality on government properties. Finally, the researcher will make the conclusion based on the findings of the study.

It has been noted in the study that DPW need to survey the service perceptions of customers in order to remain reputable in facilities management increasing competition and to generate adequate revenue for regular maintenance on all government properties. DPW should have a precise knowledge of what their customers' needs are and to make a core competency to overcome their competitors. The researcher tried to survey and evaluates the DPW customers' perceptions. The survey employed will add value to DPW and will form part of their assessment tool. It will further utilized to gauge the institution against the strengths and weaknesses.

6.2 Conclusion

Although the study looked at the maintenance programme from service quality, the study further covered some critical aspects such as understanding the concepts of quality and maintenance in a lesser detail, but just to have a basic insight. The debates on the definitions of these concepts were deemed beyond the limitation set for this study with regards to time factor.

Quality, as a concept, is defined differently by many authors, however, 'fit for purpose or 'meeting customer requirements' or conformance to customer specifications by Stevenson (2002), fits the purpose in definition. Quality is an envisioned degree of standards and involves processes. The processes include planning, implementation, monitoring and control and evaluation. It is planning that the parameters for measuring success and the legislature are identified and planned for.

Among other techniques for evaluating a programme for quality, the concept of service quality offers opportunity to look at a programme from the quality point of view. This opportunity allows the use SERVQUAL and the Gap theory. Although the service quality has not been applied in the Mpumalanga Province. This study shows that it can be applied and it can facilitate the understanding of customers' perception and aligning of programme objects to the customer needs.

Maintenance is categorized as preventive maintenance and emergency and is defined differently by authors; key to note is that it is that it is action performed on any asset to keep operational, or stopping an asset from deteriorating. In Mpumalanga Province, just like in other provinces, there has not been regular maintenance, hence a new terminology namely backlog maintenance, has been coined.

It is also evident that if properties are not maintained, such property will deteriorate and their rental value may go down. The fall in the rental value or the dilapidation may also dent the perception of the property users. The maintenance programme is being implemented on the levels of emergency and backlog maintenance rather than preventive maintenance or regular improvements.

The backlog is as a result of low budget allocations towards maintenance as well as other challenges like lack of skills, capacity and inability to retain skilled personnel. Currently the province has ±1 200 residential properties that are on backlog; receive 6000 emergency calls per financial year, and is expected to plan for preventive maintenance on 500 residential properties. The budget to roll out this programme and address the challenges noted above remains far lower than expected at R109 Million per 2008/2009 financial year budget allocation. The small allocation may not suffice to ensure achieving service quality.

From the responses to the research questions, as discussed earlier in Chapter 4, it is evident that customers' perception about the maintenance programme is linked to the physical conditions of the properties being rented or occupied. Equally, these perceptions affect the customers' attitude towards government properties. In

its current format of planning and implementation, the maintenance programme in Mpumalanga is not aligned to ensure improved customers perception.

The Department is not carrying out this aspect, even on space utilization of the properties. The customer's perceptions about the DPW's ability to perform its promised services dependably and reliably is on the negative; customers believe there is the ability, but concedes that the Department is unable to deliver because of bureaucracy and inefficiency. As observed, the Department is unable to meet its obligation because of limited resources – low budget allocation, lack of skills and capacity, and failure to plan for preventive maintenance.

The customer's perceptions about DPW's willingness to help tenants and provide a prompt service is noticed as high; but this aspect has been overshadowed by the lack of plan for preventive maintenance, which would have complimented the effort directed at emergency maintenance or day to day repairs done on the properties. Similarly, a promotional approach to market the programme would enhance the communication between the management officials and workers in the DPW and the customers; the theme promoted in the service quality concept.

The customer's perceptions about DPW's knowledge and courtesy courted a strong agree response; meaning that the DPW is striving to meet its customers' expectation despite the numerous challenges. This observation is also confirmed by the correlation among the statements - The DPW provides prompt attention to your specific needs (Code: s2.10); The DPW understands your specific needs (Code: s2.11); The DPW keeps you informed about when services will be performed (Code: s2.12) –this means that the maintenance programme lacks the vision to individualize the services as is the case in private sector driven programme.

As observed in the earlier discussions, the customer's perceptions about the caring and individualized attention that DPW provides to its customers is low and could be attributed to the weaker programme promotion activities, failure to engage stakeholders and ensure that all their misgivings are addressed and the

programme is jointly managed. In closing, it is evident that the programme is well planned and implemented despite the numerous challenges; the programme is implemented on the strong foundation of the legislative framework despite the low budgetary allocation.

In this report of “**An evaluation of the maintenance on government properties in Mpumalanga Province: A service quality perspective**”; it is articulated that some of the key attributes towards achieving service quality are the attributes that are not fully integrated in the conceptualization, planning, implementation and closure of projects under the programme as well as in the strategic management of the maintenance programme. The omissions are therefore highlighted as part of the recommendations.

6.3 Recommendations

It is not easy to draw up a list of recommendations especially on government programme that is evaluated on the technique that is mainly implemented in private sector. Time has changed and government entities are not timid to implement management techniques that are tested in private sector, so that being the case, the recommendations touch far beyond the addressing of the seven (7) Gaps. However, the section sets out with the seven (7) gaps identified from Chapter 2 and used the Parasuraman, (1995) model. In the light of the research findings, the researcher makes the following recommendations for practice by the public sector, among others the Mpumalanga DPW. Below are the responses to the research questions reflected in Chapter 1. It is advisable for DPW to adopt the gap model that will enhance DPW’s service quality on the maintenance of residential properties, namely:

Gap1: Customer’s expectations versus management perceptions

The gap exists as a result of the lack of a marketing research orientation, inadequate upward communication and too many layers of management. The programme planners should ensure that market research is conducted before the programme base plan is put in place and ensure that a communication plan is implemented.

Gap 2: Management perception versus service specifications:

The gap exists as a result of inadequate commitment to service quality, a perception of unfeasibility, inadequate task standardization and an absence of goal setting. The culture of quality assurance and standardized service aimed at definite loyal clientele needs to be adopted and budget secured for promotional activities.

Gap 3: Service specifications versus service delivery

This gap exists as a result of role ambiguity and conflict, poor employee-job fit and poor technology-job fit, inappropriate supervisory control system, lack of perceived control and lack of team work. Implement a system based management approach, standardized to avoid ambiguity, retain skilled personnel that are able to utilize the technology for supervisory control and invest into team building activities.

Specifications play a pivotal role in defining what quality is all about. In actual fact some organizations are not in possession of the formal specifications. The presence of specifications will assist to guide personnel in their activities. Its presence is prerequisite as a means of comparisons for effective quality evaluation. Its presence does not mean total standardization alone, but need an analysis and design of the entire service. In the light of the above scenario, it is recommended that both DPWs management and personnel need to enforce the collective commitment, co-operation, and team building spirit towards the effective implementation of those recommendations.

Gap 4: Service delivery versus external communication

This gap exists where there is inadequate horizontal communications and propensity to over-promise. Implement the communication plan and ensure that all stakeholders are managed and kept informed as regularly as possible and according to their position in the communication hierarchy.

External communications need to be strengthened. What is being promised to the customers should be well communicated and what the service delivery system is

actually able to provide the customers with. Inability to communicate clearly and accurately the benefits of the service offered to the customers may have a detrimental effect to the DPW's image. It is prudent for DPW to utilize effectively and to realize the options that it offers, the client need to be in possession of authentic and comprehensive information. It is also vital to utilize more than one communication resources to convey, convince and teach the customers. The designing services should be user friendly which will concurrently facilitate client use and external communication.

Internal communications:

The service strategy has to be communicated timeously to employees at all levels and be aligned with a single vision of the department and what its achievements would be? Effective communication has to be promoted for integration harmony purpose in the service institution's activities and quality. The communication is about managers listening to employees, receiving feedback about employees' perceptions of the institution's performance on its fundamental quality dimensions. It further involves managers working with and listening to other managers, by sharing problems and solutions; managers giving information to employees, about their individual performances, thus contributing to individual improvements; and prompt horizontal and vertical communications, thus flattening and inverting the hierarchical pyramid.

Gap 5: The discrepancy between customer expectations and their perceptions of the service delivered

Gap 5 is as a result of the influences exerted from the customer side and the shortfalls (gaps) on the part of the service provider. In the case, customer expectations are influenced by the extent of personal needs, word of mouth recommendation and past service experiences.

Gap 6: The discrepancy between customer expectations and employees' perceptions

Gap 6 is as a result of the differences in the understanding of customer expectations by front-line service providers. Currently, the discrepancy is not wide

but there is need for improvement frontline management. The need to implement the Batho Pele (People First) principles cannot be over emphasized.

Gap 7: The discrepancy between employee's perceptions and management perceptions

There are differences in the understanding of customer expectations between managers and service providers. This discrepancy is one most ignored challenge in public sector; it is always assumed that the executive managers, senior managers, middle managers, technical staff, and artisans and general workers work together like in the army; but the reality is far from the truth. Therefore, there is need for concerted effort towards building effective communication channels that permeate the layers in the management structure of the public entities.

The gaps identified above are cardinal to this study and formed a key framework for the evaluation of maintenance programme in Mpumalanga Province, therefore, the recommendations listed above may add value to the programme. The key argument is that without attending to the Gaps, the programme may be implemented and may also achieve some results, but such results may not meet the purpose, requirements as well as the needs of the stakeholders.

The following are the other recommendations to be taken into consideration by the management and officials within the service institutions:

Recommendation 1: Quality supportive financial function

Although a vital function to the service organization, finance involves little customer contact, expect for billing payment and credit activities. Financial management, in service organizations, has also been a constraint and an obstacle to other functions. Therefore, the importance of financial management does contribute to strategic planning, costing systems, personnel motivation, quality control etc.

Recommendation 2: Integration/ co-ordination

Integration can be achieved through several distinct devices for instance, promoting employees' mobility inside the institution, cross-training, task forces, team projects, supervision and, basically, good internal communications. There are two sides to integration. One is that every job, activity, department and function should be compatible and mutually reinforcing the other is that customers must never feel ignored, unimportant or abandoned, for example, repeatedly sent from one department to another.

Recommendation 3: Selection, training, and adequate level of autonomy, power and rewards to personnel

The significance of functional quality in service institution makes Human Resource (HR) management highly important. The section involves selection, training, giving adequate levels of autonomy, setting standards/ objectives, accessing individual performance, helping people where help is required and, finally, rewarding them for their achievements. The right people should be selected and the tendency to recruit quickly, accepting candidates with inadequate attitudes, values and skills, should be avoided.

Selected people are trained to enhance skills, improve attitudes towards customers and learn about the services offered. These people can be slowly vested with substantial responsibility, enabling them to solve customer problems in a more autonomous and satisfactory way to both parties. Contact personnel are encouraged to feed back information about customers' expectations and perceptions. Finally, personnel are rewarded for excellent service quality and their achievement is made public.

Recommendation 4: Consumer perceptions

Consumer perceptions are the difference between what consumers expect from the service and what they actually perceive of it. The need for managers to access customers' expectations and their perceptions of the quality provided should be emphasized here. Such assessment should be constant or, at least, periodic.

6.4 Conclusion

This chapter concluded the study, by summarizing the findings of data analysis, corresponds against the project research objectives. The chapter also outlined its conclusion and recommended the future improvement needed based on the identified challenges.

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APPENDIX A: CONSENT LETTER FOR RESPONDENTS (TENANTS)

**UNIVERSITY OF KWAZULU-NATAL
GRADUATE SCHOOL OF BUSINESS**

Dear Respondent,

MBA Research Project

Researcher: Ngobeni N.Z (082 456 3344 OR 013 766 6925)

Supervisor: Dr T I Nzimakwe (082 959 2635)

I, Ngobeni Nancy Zandile an MBA student, at the Graduate School of Business, of the University of Kwazulu Natal. You are invited to participate in a research project entitled “An evaluation of the maintenance on government properties in Mpumalanga Province: A service quality perspective”. The aim of this study is to: evaluate service quality from the perspective of its customers (i.e. its tenants) with a view to developing strategies to improve its service quality.

Through your participation I hope to understand and to safeguard your anonymity by omitting the use of names and places. The results of the survey are intended to contribute to Department of Public Works, Roads & Transport in developing strategies to improve its service delivery.

Your participation in this project is voluntary. You may refuse to participate or withdraw from the project at any time with no negative consequence. Confidentiality and anonymity of records identifying you as a participant will be maintained by the Graduate School of Business, UKZN.

If you have any questions or concerns about completing the questionnaire or about participating in this study, you may contact me or my supervisor at the numbers listed above.

The survey should take you about 15 to 20 minutes to complete. I hope you will take the time to complete this survey.

Sincerely

Investigator’s signature _____ Date _____

CONSENT

I _____ (full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project. I understand that I am at liberty to withdraw from the project at any time, should I so desire.

SIGNATURE OF PARTICIPANT

DATE

APPENDIX B: PURPOSE OF SURVEY (Tenants)

**UNIVERSITY OF KWAZULU-NATAL
GRADUATE SCHOOL OF BUSINESS**

MBA Research Project

Researcher: Ngobeni Nancy Zandile (082 456 3344 OR 013 766 6925)

Supervisor: Dr T I Nzimakwe (082 959 2635)

An evaluation of the maintenance on government properties in Mpumalanga Province: A service quality perspective

This purpose of this survey is to solicit information from tenants regarding service quality of government properties. The information and ratings you provide us will go a long way in helping us identify gaps in service quality of government properties. The questionnaire should only take 15-20 minutes to complete. In this questionnaire, you are asked to indicate what is true for you, so there are no “right” or “wrong” answers to any question. Work as rapidly as you can. If you wish to make a comment please write it directly on the booklet itself. Make sure not to skip any questions. Thank you for participating!

APPENDIX C: Tenants Interview Schedule (general information)

Background Information

1. Your age group is <21 20-30 31-40 41-50 51-60

2. Your Gender group Male Female

3. Your marital status Married Single Divorce Widow Living Together

4. How many years of formal education do you have beyond secondary/high school? < 1 1-2 3-4 5-6 >6 years

5. What is your highest academic' professional qualification?

Below Matric Post Matric Cert

Degree/Diploma PGDegree Other, specify

6. For how many years have you been employed?

< 1 1-5 6-10 11- > 16

7. Please indicate your main organizational function:

_____ Accountancy

_____ Administration

_____ Finance

_____ Human resource management

_____ Marketing

_____ Operations

_____ Production

_____ Customer services

_____ Other (Please specify): _____

APPENDIX D: Tenant Interview Schedule (Physical Properties)

1. What type of property do you occupy?

2. How is the physical appearance of the property?

3. For how long have you been occupying the property?

Years

4. How are the service quality standards?

5. How reliable is the service rendered to you? (Circle one option)

1
Highly
Reliable

2

3

4

5

6

7

8

9

10

Neither Reliable
nor Unreliable

Highly
Unreliable

6. Does the DPW able to perform the promised service?

7. How long does DPW take to respond on the complaints?

8. Does DPW responsible for the maintenance of properties?

9. How does DPW treat you as an individual in your needs?

10. How competent are the maintenance artisans?

11. How secured is the property you are occupying? (Circle one option)

1	2	3	4	5	6	7	8	9	10
Extremely				Favorably					Never
Secured				Secured					Secured

12. How accessible is your property? (Circle one option)

1	2	3	4	5	6	7	8	9	10
Very easy				Neither Easy					Very
				Nor Difficult					Difficult

13. How polite is the property staff?

Excellent	Great	Good	Fair	Not so good
-----------	-------	------	------	-------------

14. How often does your property get maintained?

Weekly	Monthly	Quarterly	Quarterly	Never
--------	---------	-----------	-----------	-------

APPENDIX E: Questionnaire prepared for Tenants

The DPW Provides world class properties	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The DPW has modern and clean properties	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The DPW provides variety and quality equipments	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The DPW provides variety and choices of properties	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The DPW performs the service quality for the first time	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The DPW provides property services consistently	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The DPW provides remedial procedures for emergency repairs	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The DPW provides reliable maintenance	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The DPW employees provides prompt respond to your request or complaint	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The DPW provides prompt attention to your specific needs	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The DPW understands your specific needs	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The DPW keeps you informed about when services will be performed	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The DPW provides sincerity & patience in resolving your problems	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The DPW provides safety performance of the property	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The DPW employees are knowledgeable to answer customer questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The DPW employees are consistently courteous	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The DPW provides convenient maintenance schedule	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The DPW provides frequent maintenance service by artisans	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The DPW has spontaneous care &					

concern for your needs	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The DPW has a sound loyalty programme to recognize you as a frequent customer	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

End of the Questionnaire

Thank you for taking the time to complete the questionnaire.

APPENDIX F: CONSENT LETTER FOR RESPONDENTS (DPW Officials)

**UNIVERSITY OF KWAZULU-NATAL
GRADUATE SCHOOL OF BUSINESS**

Dear Respondent,

MBA Research Project

Researcher: Ngobeni N.Z (082 456 3344 OR 013 766 6925)

Supervisor: Dr T I Nzimakwe (082 959 2635)

I, Ngobeni Nancy Zandile an MBA student, at the Graduate School of Business, of the University of Kwazulu Natal. You are invited to participate in a research project entitled “An evaluation of the maintenance on government properties in Mpumalanga Province: A service quality perspective”. The aim of this study is to: evaluate service quality from the perspective of its customers (.i.e. its tenants) with a view to developing strategies to improve its service quality.

Through your participation I hope to understand and to safeguard your anonymity by omitting the use of names and places. The results of the survey are intended to contribute to Department of Public Works in developing strategies to improve its service delivery.

Your participation in this project is voluntary. You may refuse to participate or withdraw from the project at any time with no negative consequence. Confidentiality and anonymity of records identifying you as a participant will be maintained by the Graduate School of Business, UKZN.

If you have any questions or concerns about completing the questionnaire or about participating in this study, you may contact me or my supervisor at the numbers listed above.

The survey should take you about 15 to 20 minutes to complete. I hope you will take the time to complete this survey.

Sincerely

Investigator’s signature _____ Date _____

CONSENT

I _____ (full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project. I understand that I am at liberty to withdraw from the project at any time, should I so desire.

SIGNATURE OF PARTICIPANT

DATE

APPENDIX G: PURPOSE OF SURVEY (DPW Officials)

**UNIVERSITY OF KWAZULU-NATAL
GRADUATE SCHOOL OF BUSINESS**

MBA Research Project

Researcher: Ngobeni Nancy Zandile (082 456 3344 Or 013 766 6925)
Supervisor: Dr T I Nzimakwe (082 959 2635)

An evaluation of the maintenance on government properties in Mpumalanga Province: A service quality perspective

This purpose of this survey is to solicit information from DPW officials regarding service quality of government properties. The information and ratings you provide us will go a long way in helping us identify gaps in service quality of government properties. The questionnaire should only take 15-20 minutes to complete. In this questionnaire, you are asked to indicate what is true for you, so there are no “right” or “wrong” answers to any question. Work as rapidly as you can. If you wish to make a comment please write it directly on the booklet itself. Make sure not to skip any questions. Thank you for participating!

APPENDIX H: Interview Schedule for DPW officials (general information)

Background Information

1. Your age group is

2. Your Gender group

3. Your marital status

4. How many years of formal education do you have beyond secondary/high school?

years.

5. What is your highest academic' professional qualification?

6. For how many years have you been employed?

Years

7. Please indicate your main organizational function:

_____ Accountancy

_____ Administration

_____ Finance

_____ Human resource management

_____ Marketing

_____ Operations

_____ Production

_____ Customer services

_____ Other (Please specify): _____

APPENDIX I: Interview schedule for DPW officials (Physical Properties)

1. How is the condition of those properties?

Excellent	Good	Fair	Bad	Very Bad
-----------	------	------	-----	----------

2. What type of property does DPW have?

Flat	Independent property	Space in shopping center	Other
------	----------------------	--------------------------	-------

3. Do you keep service quality promise?

Yes	No	I don't know	No response	Never
-----	----	--------------	-------------	-------

4. Is the customer survey system in place?

Yes	No	I don't know	No response
-----	----	--------------	-------------

5. How long does it take to respond to the customers' complaints?

2 working days	1 week	2 weeks	1 month	1 year
----------------	--------	---------	---------	--------

6. Who is responsible for the maintenance of the government properties?

Government Artisans	Government Officials	Tenants	Service Providers	None
---------------------	----------------------	---------	-------------------	------

7. How do you treat your tenants based on their needs?

Excellent	Good	Fair	Bad	Very Bad
-----------	------	------	-----	----------

8. How competent are the artisans on the property maintenance?

Excellent	Good	Fair	Bad	Very Bad
-----------	------	------	-----	----------

9. How accessible are the properties? (Circle one option)

1	2	3	4	5	6	7	8	9	10
Very easy			Neither Easy Nor Difficult				Very Difficult		

10. How secured are those properties? (Circle one option)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

APPENDIX J: Questionnaire prepared for DPW officials

DPW provides world class properties to the customers	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
DPW provides modern and clean properties to the customers	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
DPW provides variety and quality equipments to our customers	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
DPW provides variety and choices of properties to our customers	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
DPW performs the service quality for the first time	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
DPW provides property services consistently	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
DPW provides remedial procedures for emergency repairs	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
DPW provides reliable maintenance	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
DPW employees provides prompt response to the customers' request or complaint	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
DPW provides prompt attention to the customers' specific needs	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
DPW understands the customers' specific needs	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
DPW keeps our customers' informed about when services will be performed	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
DPW provides sincerity & patience in resolving the customers' problems	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
DPW provides safety performance of the property	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
DPW employees are consistently courteous	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
DPW provides convenient maintenance schedule	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
DPW artisans provides frequent maintenance service	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
DPW provides spontaneous care & concern for the customers' needs	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
DPW have a sound loyalty programme to recognize them as frequent customers	Strongly	Disagree	Neutral	Agree	Strongly Agree

	Disagree				
--	----------	--	--	--	--

End of the Questionnaire

Thank you for taking the time to complete the questionnaire

Annexure A: Data Analysis in Details-Reliability, Dispersion and Correlation

4.6 Data Analysis for Reliability, Dispersion and Correlation

As mentioned earlier in this report, there are many statistical techniques available for the analysis of data in terms reliability, dispersion and correlation. However, the following techniques are chosen and applied, in this study, not because these are the best, but are more familiar. The Cronbach Alpha Test (Reliability Test), T test, ANOVA, Correlation and Chi Squared Test are applied to further analyze the data.

4.6.1 Cronbach Alpha Test (Reliability Test)

Cronbach model is used to determine the reliability of the measurement scale of service quality after the research. It has two result options, if Cronbach Alpha value is between 0.4 to 0.7 the research result indicates of medium internal consistency and reliability. On the other hand, If Cronbach Alpha value is between 0.7 to 1.0, indicates of High or good internal consistency and reliability

Case Processing Summary				Reliability Statistics	
		N	%	Cronbach's Alpha	
Cases	Valid	85	97.7	.489	
	Excluded	2	2.3		
	Total	87	100.0		

Table 4.1.6: Cronbach Alpha Test (Reliability Test)

Reliability analysis of the questionnaire continuous study statements of section 2 reveals combat's alpha value is 0.489 and it indicates this research instrument's (Questionnaire) continuous study variables section 2 have medium internal consistency and reliability.

4.6.2 The T- Test

The rule of Interpretation for the T Test is follows:

1. If **p** value is less than or equal **p ≤ 0.05**, statistically there is significance difference between group's opinions.
2. If **p** value is greater than **p > 0.05**, statistically there is NO significance difference between groups' opinions.

Table 4.1.7: T- Test I

		T- Test		
		t- test		
		t	df	Sig. (2-tailed)
s2.1	Equal variances assumed	- 1.009	85	.316
	Equal variances not assumed	- 1.006	80.066	.317
s2.2	Equal variances assumed	2.021	85	.046
	Equal variances not assumed	2.022	84.954	.046
s2.3	Equal variances assumed	-.741	84	.461
	Equal variances not assumed	-.735	72.822	.465
s2.4	Equal variances assumed	1.787	84	.078
	Equal variances not assumed	1.787	80.438	.078
s2.5	Equal variances assumed	- 1.685	84	.096
	Equal variances not assumed	- 1.685	81.985	.096

The above T-test results disclose, the **p** significance values are 0.316, 0.461, 0.078, and 0.096 for statements s2.1, s2.3, s2.4, s2.5 and above **0.05**. It reveals statistically there is **NO significance difference** between gender groups (males, females) perceptions towards the above research statements. (This means males and females respondents have almost similar type of opinions towards the these research statements and no huge difference in male, female opinions)

The above T-test results disclose, the **p** significance value is 0.046 for statement s2.2 and below **0.05**. It reveals statistically there is **significance difference** between gender groups (males, females) perceptions towards the above research statement. (This means males and females respondents have different type of opinions towards this research statement and adequate difference in male, female opinions).

Table 4.1.8: T- Test II, Adapted by the Author (2009)

		T- Test		
		t-test		
		t	df	Sig. (2-tailed)
s2.6	Equal variances assumed	-1.034	84	.304
	Equal variances not assumed	-1.033	83.148	.305
s2.7	Equal variances assumed	1.492	85	.139
	Equal variances not assumed	1.492	84.996	.139
s2.8	Equal variances assumed	-.917	85	.362
	Equal variances not assumed	-.918	84.303	.361
s2.9	Equal variances assumed	.099	84	.922
	Equal variances not assumed	.098	82.196	.922
s2.10	Equal variances assumed	1.353	85	.179
	Equal variances not assumed	1.355	84.701	.179

The above T-test results disclose, the **p** significance values are 0.304, 0.139, 0.362, 0.922, and 0.179 for statements s2.6, s2.7, s2.8, s2.9, s2.10 and above **0.05**.

It reveals statistically there is **NO significance difference** between gender groups (males, females) perceptions towards the above research statements. (This means males and females respondents have almost similar type of opinions towards these research statements and no huge difference in male, female opinions).

Table 4.1.9: T- Test III

T- Test

		t-test		
		t	df	Sig. (2-tailed)
s2.11	Equal variances assumed	-1.016	85	.312
	Equal variances not assumed	-1.017	84.991	.312
s2.12	Equal variances assumed	-.883	85	.380
	Equal variances not assumed	-.884	83.934	.379
s2.13	Equal variances assumed	.828	85	.410
	Equal variances not assumed	.827	83.326	.411
s2.14	Equal variances assumed	-.536	85	.594
	Equal variances not assumed	-.535	84.247	.594
s2.15	Equal variances assumed	.635	85	.527
	Equal variances not assumed	.635	84.866	.527

The above T-test results disclose, the **p** significance values are 0.312, 0.380, 0.410, 0.594, and 0.527 for statements s2.11, s2.12, s2.13, s2.14, s2.15 and above **0.05**. It reveals statistically there is **NO significance difference** between gender groups (males, females) perceptions towards the above research statements.

(This means males and females respondents have almost similar type of opinions towards these research statements and no huge difference in male, female opinions).

Table 4.2.0: T- Test IV

T- Test

		t-test for Equality of Means		
		t	df	Sig. (2-tailed)
s2.16	Equal variances assumed	.451	85	.653
	Equal variances not assumed	.451	84.282	.653
s2.17	Equal variances assumed	-.078	85	.938
	Equal variances not assumed	-.078	82.700	.938
s2.18	Equal variances assumed	.392	85	.696
	Equal variances not assumed	.392	84.926	.696
s2.19	Equal variances assumed	-.055	85	.956
	Equal variances not assumed	-.055	84.965	.956
s2.20	Equal variances assumed	.979	85	.330
	Equal variances not assumed	.979	84.619	.331

The above T-test results disclose, the **p** significance values are 0.653, 0.938, 0.696, 0.956, and 0.330 for statements s2.16, s2.17, s2.18, s2.19, s2.20 and above **0.05**. It reveals statistically there is **NO significance difference** between gender groups (males, females) perceptions towards the above research statements. (This means males and females respondents have almost similar type of opinions towards the these research statements and no huge difference in male, female opinions)

4.6.3 ANOVA Test

The full description of ANOVA is given the preceding chapter, however, there are two options governing the application and interpretation of the results of this technique:

- 1) If **p** value is less than or equal **p ≤ 0.05**, statistically there is significance difference between groups' opinions.
- 2) If **p** value is greater than **p > 0.05**, statistically there is **NO** significance difference between groups' opinions, where **p** indicates a probability.

Table 4.2.1: ANOVA Test and the age group I

ANOVA					
		Sum of Squares	df	Mean Square	Sig.
s2.1	Between Groups	1.998	3	.666	.794
	Within Groups	160.715	83	1.936	
	Total	162.713	86		
s2.2	Between Groups	2.005	3	.668	.683
	Within Groups	110.845	83	1.335	
	Total	112.851	86		
s2.3	Between Groups	1.625	3	.542	.762
	Within Groups	114.329	82	1.394	
	Total	115.953	85		
s2.4	Between Groups	2.159	3	.720	.761
	Within Groups	151.562	82	1.848	
	Total	153.721	85		
s2.5	Between Groups	3.574	3	1.191	.552
	Within Groups	138.752	82	1.692	
	Total	142.326	85		

4.6.3.1 ANOVA Test and the Age groups

The ANOVA test results above reveal there is **no statistically significance difference** in perceptions of different age groups respondents towards the research statements because these statements **p** significance values are 0.794, 0.683, 0.762, 0.761, 0.552 and above **0.05**.

(This means different age groups respondents have almost similar opinions towards these statements and there is no huge difference in different groups' respondent's opinions towards these research statements).

Table 4.2.2: ANOVA Test and the age group II

ANOVA					
		Sum of Squares	df	Mean Square	Sig.
s2.6	Between Groups	1.471	3	.490	.859
	Within Groups	158.959	82	1.939	
	Total	160.430	85		
s2.7	Between Groups	4.794	3	1.598	.426
	Within Groups	141.206	83	1.701	
	Total	146.000	86		
s2.8	Between Groups	4.655	3	1.552	.429
	Within Groups	138.242	83	1.666	
	Total	142.897	86		
s2.9	Between Groups	4.830	3	1.610	.315
	Within Groups	110.065	82	1.342	
	Total	114.895	85		
s2.10	Between Groups	3.113	3	1.038	.551
	Within Groups	121.944	83	1.469	
	Total	125.057	86		

The above ANOVA test results reveal there is **no statistically significance difference** in perceptions of different age groups respondents towards the research statements because these statements **p** significance values are 0.859, 0.426, 0.429, 0.315, 0.551 and above **0.05**. (This means different age groups respondents have almost similar opinions towards these statements and there is no huge difference in different groups' respondent's opinions towards these research statements).

Table 4.2.3: ANOVA Test and the age group III

ANOVA

		Sum of Squares	df	Mean Square	Sig.
s2.11	Between Groups	1.785	3	.595	.736
	Within Groups	116.284	83	1.401	
	Total	118.069	86		
s2.12	Between Groups	2.102	3	.701	.756
	Within Groups	146.955	83	1.771	
	Total	149.057	86		
s2.13	Between Groups	2.640	3	.880	.601
	Within Groups	116.970	83	1.409	
	Total	119.609	86		
s2.14	Between Groups	.835	3	.278	.899
	Within Groups	118.429	83	1.427	
	Total	119.264	86		
s2.15	Between Groups	3.145	3	1.048	.525
	Within Groups	115.843	83	1.396	
	Total	118.989	86		

The above ANOVA test results reveal there is **no statistically significance difference** in perceptions of different age groups respondents towards the research statements because these statements **p** significance values are 0.736, 0.756, 0.601, 0.899, 0.525 and above **0.05**. (This means different age groups respondents have almost similar opinions towards these statements and there is no huge difference in different groups respondent's opinions towards these research statements).

Table 4.2.4: ANOVA Test and the age group IV

ANOVA					
		Sum of Squares	df	Mean Square	Sig.
s2.16	Between Groups	5.277	3	1.759	.262
	Within Groups	107.780	83	1.299	
	Total	113.057	86		
s2.17	Between Groups	.942	3	.314	.895
	Within Groups	129.127	83	1.556	
	Total	130.069	86		
s2.18	Between Groups	4.307	3	1.436	.493
	Within Groups	147.303	83	1.775	
	Total	151.609	86		
s2.19	Between Groups	.949	3	.316	.875
	Within Groups	113.970	83	1.373	
	Total	114.920	86		
s2.20	Between Groups	7.215	3	2.405	.140
	Within Groups	106.532	83	1.284	
	Total	113.747	86		

The above ANOVA test results reveal there is **no statistically significance difference** in perceptions of different age groups respondents towards the research statements because these statements **p** significance values are 0.262, 0.895, 0.493, 0.875, 0.140 and above **0.05**. (This means different age groups respondents have almost similar opinions towards these statements and there is no huge difference in different group respondent's opinions towards these research statements).

4.6.3.2. ANOVA Test and the Marital Status

Table 4.2.5: ANOVA Test and Marital Status I

ANOVA					
		Sum of Squares	df	Mean Square	Sig.
s2.1	Between Groups	5.867	4	1.467	.553
	Within Groups	151.942	79	1.923	
	Total	157.810	83		
s2.2	Between Groups	4.348	4	1.087	.494
	Within Groups	100.354	79	1.270	
	Total	104.702	83		
s2.3	Between Groups	7.538	4	1.885	.235
	Within Groups	103.450	78	1.326	
	Total	110.988	82		
s2.4	Between Groups	6.313	4	1.578	.502
	Within Groups	145.952	78	1.871	
	Total	152.265	82		
s2.5	Between Groups	4.625	4	1.156	.596
	Within Groups	129.399	78	1.659	
	Total	134.024	82		

The above ANOVA test results reveal there is **no statistically significance difference** in perceptions of different age groups respondents towards the research statements because these statements **p** significance values are 0.553, 0.494, 0.235, 0.502, 0.596 and above **0.05**. (This means different age groups respondents have almost similar opinions towards these statements and there is no huge difference in different group's respondent's opinions towards these research statements).

Table 4.2.6: ANOVA Test and Marital Status II

ANOVA

		Sum of Squares	df	Mean Square	Sig.
s2.6	Between Groups	5.618	4	1.405	.586
	Within Groups	153.948	78	1.974	
	Total	159.566	82		
s2.7	Between Groups	6.733	4	1.683	.402
	Within Groups	130.255	79	1.649	
	Total	136.988	83		
s2.8	Between Groups	5.655	4	1.414	.502
	Within Groups	132.345	79	1.675	
	Total	138.000	83		
s2.9	Between Groups	.698	4	.174	.971
	Within Groups	105.254	78	1.349	
	Total	105.952	82		
s2.10	Between Groups	.947	4	.237	.959
	Within Groups	118.006	79	1.494	
	Total	118.952	83		

The above ANOVA test results reveal there is **no statistically significance difference** in perceptions of different age groups respondents towards the research statements because these statements **p** significance values are 0.586, 0.402 0.502, 0.971, 0.959 and above **0.05**. (This means different age groups respondents have almost similar opinions towards these statements and there is no huge difference in different group's respondent's opinions towards these research statements).

Table 4.2.7: ANOVA Test and Marital Status III

ANOVA					
		Sum of Squares	df	Mean Square	Sig.
s2.11	Between Groups	9.994	4	2.499	.128
	Within Groups	106.815	79	1.352	
	Total	116.810	83		
s2.12	Between Groups	8.012	4	2.003	.321
	Within Groups	132.797	79	1.681	
	Total	140.810	83		
s2.13	Between Groups	7.621	4	1.905	.255
	Within Groups	110.665	79	1.401	
	Total	118.286	83		
s2.14	Between Groups	2.217	4	.554	.813
	Within Groups	111.343	79	1.409	
	Total	113.560	83		
s2.15	Between Groups	3.610	4	.903	.647
	Within Groups	114.342	79	1.447	
	Total	117.952	83		

The above ANOVA test results reveal there is **no statistically significance difference** in perceptions of different age groups respondents towards the research statements because these statements **p** significance values are 0.128, 0.321, 0.255, 0.813, 0.647 and above **0.05**. (This means different age groups respondents have almost similar opinions towards these statements and there is no huge difference in different group's respondent's opinions towards these research statements).

Table 4.2.8: ANOVA Test and Marital Status IV

ANOVA					
		Sum of Squares	df	Mean Square	Sig.
s2.16	Between Groups	.945	4	.236	.953
	Within Groups	109.340	79	1.384	
	Total	110.286	83		
s2.17	Between Groups	2.294	4	.573	.815
	Within Groups	116.123	79	1.470	
	Total	118.417	83		
s2.18	Between Groups	6.415	4	1.604	.454
	Within Groups	137.144	79	1.736	
	Total	143.560	83		
s2.19	Between Groups	2.431	4	.608	.787
	Within Groups	111.807	79	1.415	
	Total	114.238	83		
s2.20	Between Groups	6.579	4	1.645	.288
	Within Groups	102.230	79	1.294	
	Total	108.810	83		

The above ANOVA test results reveal there is **no statistically significance difference** in perceptions of different age groups respondents towards the research statements because these statements **p** significance values are 0.953, 0.815, 0.454, 0.787, 0.288 and above **0.05**. (This means different age groups respondents have almost similar opinions towards these statements and there is no huge difference in different group's respondent's opinions towards these research statements).

4.6.3.3 ANOVA Test and the Education

Table 4.2.9: ANOVA Test and Education I

ANOVA					
		Sum of Squares	df	Mean Square	Sig.
s2.1	Between Groups	10.731	5	2.146	.319
	Within Groups	136.256	76	1.793	
	Total	146.988	81		
s2.2	Between Groups	8.262	5	1.652	.286
	Within Groups	98.860	76	1.301	
	Total	107.122	81		
s2.3	Between Groups	10.194	5	2.039	.190
	Within Groups	99.756	75	1.330	
	Total	109.951	80		
s2.4	Between Groups	6.811	5	1.362	.598
	Within Groups	138.621	75	1.848	
	Total	145.432	80		
s2.5	Between Groups	19.194	5	3.839	.039
	Within Groups	115.719	75	1.543	
	Total	134.914	80		

The above ANOVA test results reveal there is **no statistically significance difference** in perceptions of different age groups respondents towards the research statements because these statements **p** significance values are 0.319, 0.286, 0.190, 0.598, and above **0.05**. (This means different age groups respondents have almost similar opinions towards these statements and there is no huge difference in different group's respondent's opinions towards these research statements).

The above T-test results disclose, the **p** significance value is 0.039 for statement s2.5 and below **0.05**. It reveals statistically there is **significance difference** between gender groups (males, females) perceptions towards the above research statement. (This means males and females respondents have different type of opinions towards this research statement and adequate difference in male, female opinions).

Table 4.3.0: ANOVA Test and Education II**ANOVA**

		Sum of Squares	df	Mean Square	Sig.
s2.6	Between Groups	3.614	4	.904	.755
	Within Groups	145.077	76	1.909	
	Total	148.691	80		
s2.7	Between Groups	4.085	5	.817	.790
	Within Groups	129.476	76	1.704	
	Total	133.561	81		
s2.8	Between Groups	8.071	5	1.614	.453
	Within Groups	128.917	76	1.696	
	Total	136.988	81		
s2.9	Between Groups	7.707	5	1.541	.317
	Within Groups	96.293	75	1.284	
	Total	104.000	80		
s2.10	Between Groups	3.540	5	.708	.803
	Within Groups	116.472	76	1.533	
	Total	120.012	81		

The above ANOVA test results reveal there is **no statistically significance difference** in perceptions of different age groups respondents towards the research statements because these statements **p** significance values are 0.755, 0.790, 0.453, 0.317, 0.803 and above **0.05**. (This means different age groups respondents have almost similar opinions towards these statements and there is no huge difference in different group's respondent's opinions towards these research statements).

Table 4.3.1: ANOVA Test and Education III

ANOVA

		Sum of Squares	df	Mean Square	Sig.
s2.11	Between Groups	16.874	5	3.375	.021
	Within Groups	90.687	76	1.193	
	Total	107.561	81		
s2.12	Between Groups	7.718	5	1.544	.501
	Within Groups	133.758	76	1.760	
	Total	141.476	81		
s2.13	Between Groups	6.553	5	1.311	.475
	Within Groups	108.666	76	1.430	
	Total	115.220	81		
s2.14	Between Groups	5.747	5	1.149	.507
	Within Groups	100.656	76	1.324	
	Total	106.402	81		
s2.15	Between Groups	6.811	5	1.362	.460
	Within Groups	110.177	76	1.450	
	Total	116.988	81		

The above ANOVA test results reveal there is **no statistically significance difference** in perceptions of different age groups respondents towards the research statements because these statements **p** significance values are 0.501, 0.475, 0.507, 0.460, and above **0.05**. (This means different age groups respondents have almost similar opinions towards these statements and there is no huge difference in different group's respondent's opinions towards these research statements).

The above T-test results disclose, the **p** significance value is 0.021 for statement s2.11 and below **0.05**. It reveals statistically there is **significance difference** between gender groups (males, females) perceptions towards the above research statement. (This means males and females respondents have different type of opinions towards the this research statement and adequate difference in male, female opinions)

Table 4.3.2: ANOVA Test and Education IV

ANOVA					
		Sum of Squares	df	Mean Square	Sig.
s2.16	Between Groups	8.051	5	1.610	.311
	Within Groups	100.888	76	1.327	
	Total	108.939	81		
s2.17	Between Groups	12.699	5	2.540	.119
	Within Groups	106.081	76	1.396	
	Total	118.780	81		
s2.18	Between Groups	15.271	5	3.054	.110
	Within Groups	124.290	76	1.635	
	Total	139.561	81		
s2.19	Between Groups	8.943	5	1.789	.221
	Within Groups	94.569	76	1.244	
	Total	103.512	81		
s2.20	Between Groups	10.678	5	2.136	.172
	Within Groups	101.810	76	1.340	
	Total	112.488	81		

The above ANOVA test results reveal there is **no statistically significance difference** in perceptions of different age groups respondents towards the research statements because these statements **p** significance values are 0.311, 0.119, 0.110, 0.221, 0.172 and above **0.05**. (This means different age groups respondents have almost similar opinions towards these statements and there is no huge difference in different group's respondent's opinions towards these research statements).

4.6.4 Data Analysis: Correlations

The full description of this statistical technique is given the preceding chapter, however, there are six aspects (rules) governing the application and interpretation of the results of this technique:

1. The Sig. value (probability value) **p** \leq **0.05**, than there is statistically significance correlation;
2. Pearson correlation coefficient (**r**) values starts from **-1** to **+1**;
3. If **-** means negative correlation (If one variable increases other variable will decrease);

4. If + means positive relationship. (If one variable increases other variable will also increase);

5. - or + indicates direction of relationship between two variables.

6. Strength relationship:

Table 4.3.3: Strengths of Relationship

r = .10 to .29 or -.10 to -.29	small (moderate) correlation
r = .30 to .49 or -.30 to -.49	medium correlation
r = .50 to 1.0 or -.50 to -1.0	large (strong) correlation

4.6.4.1 Correlations of Coded element s2.1 to s2.5 and s2.6 to s2.10

Table 4.3.4: Correlations of Coded element s2.1 to s2.5 and s2.6 to s2.10

		Correlations				
		s2.6	s2.7	s2.8	s2.9	s2.10
s2.1	Pearson Correlation	.020	.208	-.019	.036	.093
	Sig. (2-tailed)	.853	.054	.865	.741	.392
	N	86	87	87	86	87
s2.2	Pearson Correlation	.071	.000	.037	.232*	-.142
	Sig. (2-tailed)	.517	1.000	.736	.031	.190
	N	86	87	87	86	87
s2.3	Pearson Correlation	-.032	.208	.101	-.018	-.031
	Sig. (2-tailed)	.771	.055	.355	.873	.779
	N	85	86	86	85	86
s2.4	Pearson Correlation	-.193	.201	-.001	-.126	.116
	Sig. (2-tailed)	.076	.064	.991	.251	.287
	N	85	86	86	85	86
s2.5	Pearson Correlation	-.279**	-.139	.005	.231*	.106
	Sig. (2-tailed)	.010	.203	.964	.033	.332
	N	85	86	86	85	86

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

The analysis of the tables indicates the following:

- The relationship of statement s2.1 with statements s2.6, s2.7, s2.8, s2.9, s2.10 has **p** values 0.853, 0.054, 0.865, 0.741, 0.392 and these **p** values are above **0.05** and it indicates the statement s2.1 with statements s2.6, s2.7, s2.8, s2.9, s2.10 **does not have statistically significance correlation.**

- The relationship of statement s2.2 with statements s2.6, s2.7, s2.8, s2.10 has **p** values 0.517, 1.0, 0.736, 0.190 and these **p** values are above **0.05** and it indicates the statement s2.2 with statements s2.6, s2.7, s2.8, s2.10 **does not** have **statistically significance correlation**.
- The relationship of statement p2.2 with statement s2.9 has **p** value 0.031 and this **p** value is less than **0.05** and it indicates the statement s2.2 with statement s2.9 **have statistically significance correlation**. The +Ve sign in front of s2.9 indicates positive correlation. Pearson product correlation coefficient **r** value 0.232 indicates moderate correlation between them.
- The relationship of statement s2.3 with statements s2.6, s2.7, s2.8, s2.9, s2.10 has **p** values 0.771, 0.055, 0.355, 0.873, 0.779 and these **p** values are above **0.05** and it indicates the statement s2.3 with statements s2.6, s2.7, s2.8, s2.9, s2.10 **does not have statistically significance correlation**.
- The relationship of statement s2.4 with statements s2.6, s2.7, s2.8, s2.9, s2.10 has **p** values 0.076, 0.064, 0.991, 0.251, 0.287 and these **p** values are above **0.05** and it indicates the statement s2.4 with statements s2.6, s2.7, s2.8, s2.9, s2.10 **does not have statistically significance correlation**.
- The relationship of statement s2.5 with statements s2.7, s2.8, s2.10 has **p** values 0.203, 0.964, 0.332 and these **p** values are above **0.05** and it indicates the statement s2.5 with statements s2.7, s2.8, s2.10 **does not have statistically significance correlation**.
- The relationship of statement p2.5 with statements s2.6, s2.9 has **p** values 0.010, 0.033 and these **p** values are less than **0.05** and it indicates the statement s2.5 with statements s2.6, s2.9 **have statistically significance correlation**. The +Ve sign in front of s2.9 indicates positive correlation and -Ve sign in front of s2.6 indicates negative correlation. Pearson product correlation coefficient **r** values 0.279, 0.231 indicates moderate correlation between them.

4.6.4.2 Correlations of Coded element s2.1 to s2.5 and s2.11 to s2.15

Table 4.3.5: Correlations of Coded element s2.1 to s2.5 and s2.11 to s2.15

		Correlations				
		s2.11	s2.12	s2.13	s2.14	s2.15
s2.1	Pearson Correlation	-.256 *	-.005	.182	.025	.036
	Sig. (2-tailed)	.017	.965	.092	.815	.738
	N	87	87	87	87	87
s2.2	Pearson Correlation	-.096	.179	-.107	.106	.174
	Sig. (2-tailed)	.378	.098	.325	.330	.106
	N	87	87	87	87	87
s2.3	Pearson Correlation	.127	.080	.045	.105	.000
	Sig. (2-tailed)	.244	.464	.683	.337	.997
	N	86	86	86	86	86
s2.4	Pearson Correlation	.129	-.060	.074	.060	.015
	Sig. (2-tailed)	.237	.582	.496	.582	.892
	N	86	86	86	86	86
s2.5	Pearson Correlation	-.091	.219 *	-.142	-.167	.309 **
	Sig. (2-tailed)	.407	.043	.192	.124	.004
	N	86	86	86	86	86

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

The analysis of the tables indicates the following:

- The relationship of statement s2.1 with statements s2.12, s2.13, s2.14, s2.15 has **p** values 0.965, 0.092, 0.815, 0.738 and these **p** values are above **0.05** and it indicates the statement s2.1 with statements s2.12, s2.13, s2.14, s2.15 **does not have statistically significance correlation.**
- The relationship of statement s2.1 with statements s2.11, has **p** values 0.017 and this value is above **0.05** and it indicates the statement s2.1 with statements s2.11 have **statistically significance correlation.** The -Ve sign in front of s2.11 indicates negative correlation. Pearson product correlation coefficient **r** value 0.256 indicates moderate correlation between them.
- The relationship of statement s2.2 with statement s2.11, s2.12, s2.13, s2.14, s2.15 has **p** value 0.378, 0.098, 0.325, 0.330, 0.106 and these **p** values are less than **0.05** and it indicates the statement s2.2 with statement s2.11, s2.12, s2.13, s2.14, s2.15 **does not have statistically significance correlation.**

- The relationship of statement s2.3 with statements s2.11, s2.12, s2.13, s2.14, s2.15 has **p** values 0.244, 0.464, 0.683, 0.337, 0.997 and these **p** values are above **0.05** and it indicates the statement s2.3 with statements s2.11, s2.12, s2.13, s2.14, s2.15 **does not have statistically significance correlation.**
- The relationship of statement s2.4 with statements s2.11, s2.12, s2.13, s2.14, s2.15 has **p** values 0.237, 0.582, 0.496, 0.582, 0.892 and these **p** values are above **0.05** and it indicates the statement s2.4 with statements s2.11, s2.12, s2.13, s2.14, s2.15 **does not have statistically significance correlation.**
- The relationship of statement s2.5 with statements s2.11, s2.13, s2.14 has **p** values 0.407, 0.192, 0.124 and these **p** values are above **0.05** and it indicates the statement s2.5 with statements s2.11, s2.13, s2.14, **does not have statistically significance correlation.**
- The relationship of statement p2.5 with statements s2.12, s2.15 has **p** values 0.043, and 0.004 and these **p** values are less than **0.05** and it indicates the statement s2.5 with statements s2.12, s2.15, **have statistically significance correlation.** The +Ve sign in front of s2.12, s2.15 indicate positive correlation. Pearson product correlation coefficient **r** values 0.219, 0.309 indicates moderate correlation between them.

4.6.4.3 Correlations of Coded element s2.1 to s2.5 and s2.16 to s2.20

Table 4.3.6: Correlations of Coded element s2.1 to s2.5 and s2.16 to s2.20

		Correlations				
		s2.16	s2.17	s2.18	s2.19	s2.20
s2.1	Pearson Correlation	.035	-.279**	.042	.124	.077
	Sig. (2-tailed)	.748	.009	.698	.252	.479
	N	87	87	87	87	87
s2.2	Pearson Correlation	-.081	-.024	-.058	-.155	.003
	Sig. (2-tailed)	.455	.822	.593	.152	.975
	N	87	87	87	87	87
s2.3	Pearson Correlation	-.055	.027	.217*	.016	.035
	Sig. (2-tailed)	.615	.805	.045	.887	.750
	N	86	86	86	86	86
s2.4	Pearson Correlation	.191	.046	.156	.183	.034
	Sig. (2-tailed)	.079	.673	.153	.092	.758
	N	86	86	86	86	86
s2.5	Pearson Correlation	-.159	-.097	.092	-.108	-.151
	Sig. (2-tailed)	.143	.376	.399	.324	.166
	N	86	86	86	86	86

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

The analysis of the tables indicates the following:

- The relationship of statement s2.1 with statements s2.16, s2.18, s2.19, s2.20 has **p** values 0.748, 0.698, 0.252, 0.479 and these **p** values are above **0.05** and it indicates the statement s2.1 with statements s2.16, s2.18, s2.19, s2.20 **does not have statistically significance correlation.**
- The relationship of statement p2.1 with statement s2.17 has **p** value 0.009 and this **p** value is less than **0.05** and it indicates the statement s2.1 with statement s2.17 **have statistically significance correlation.** The -Ve sign in front of s2.17 indicates negative correlation. Pearson product correlation coefficient **r** value 0.279 indicates moderate correlation between them.
- The relationship of statement s2.2 with statements s2.16, s2.17, s2.18, s2.19, s2.20 has **p** values 0.455, 0.822, 0.593, 0.152, 0.975 and these **p** values are above **0.05** and it indicates the statement s2.2 with statements s2.16, s2.17, s2.18, s2.19, s2.20 **does not have statistically significance correlation.**

- The relationship of statement s2.3 with statements s2.16, s2.17, s2.19, s2.20 has **p** values 0.615, 0.805, 0.887, 0.750 and these **p** values are above **0.05** and it indicates the statement s2.3 with statements s2.16, s2.17, s2.19, s2.20 **does not have statistically significance correlation.**
- The relationship of statement p2.3 with statements s2.18 has **p** values 0.045, the **p** value is less than **0.05** and it indicates the statement s2.3 with statements s2.18 **have statistically significance correlation.** The +Ve sign in front of s2.18 indicates positive correlation. Pearson product correlation coefficient **r** values 0.217, indicates moderate correlation between them.
- The relationship of statement s2.4 with statements s2.16, s2.17, s2.18, s2.19, s2.20 has **p** values 0.079, 0.673, 0.153, 0.092, 0.108 and these **p** values are above **0.05** and it indicates the statement s2.4 with statements s2.16, s2.17, s2.18, s2.19, s2.20 **does not have statistically significance correlation.**
- The relationship of statement s2.5 with statements s2.16, s2.17, s2.18, s2.19, s2.20 has **p** values 0.143, 0.376, 0.399, 0.324, 0.166 and these **p** values are above **0.05** and it indicates the statement s2.5 with statements s2.16, s2.17, s2.18, s2.19, s2.20 **does not have statistically significance correlation.**

4.6.4.4 Correlations of Coded elements s2.6 to s2.10 and s2.11 to s2.15

Table 4.3.7: Correlations of Coded element s2.6 to s2.10 and s2.11 to s2.15

		Correlations				
		s2.11	s2.12	s2.13	s2.14	s2.15
s2.6	Pearson Correlation	.082	-.040	-.002	.084	.028
	Sig. (2-tailed)	.455	.715	.986	.440	.795
	N	86	86	86	86	86
s2.7	Pearson Correlation	-.099	-.075	.204	.061	-.038
	Sig. (2-tailed)	.362	.492	.058	.577	.727
	N	87	87	87	87	87
s2.8	Pearson Correlation	.136	.236*	.033	-.059	-.123
	Sig. (2-tailed)	.208	.028	.758	.586	.257
	N	87	87	87	87	87
s2.9	Pearson Correlation	-.144	-.003	.176	-.073	.138
	Sig. (2-tailed)	.186	.978	.105	.506	.205
	N	86	86	86	86	86
s2.10	Pearson Correlation	-.269*	-.249*	.068	.113	.124
	Sig. (2-tailed)	.012	.020	.529	.297	.252
	N	87	87	87	87	87

*. Correlation is significant at the 0.05 level (2-tailed).

The analysis of the tables indicates the following:

- The relationship between statement s2.6 and statements s2.11, s2.12, s2.13, s2.14, s2.15 has **p** values 0.455, 0.715, 0.986, 0.440, 0.795 and these **p** values are above **0.05** and it indicates the statement s2.6 with statements s2.11, s2.12, s2.13, s2.14, s2.15 **does not have statistically significance correlation.**
- The relationship between statement s2.7 and statements s2.11, s2.12, s2.13, s2.14, s2.15 has **p** values 0.362, 0.492, 0.058, 0.577, 0.727 and these **p** values are above **0.05** and it indicates the statement s2.7 with statements s2.11, s2.12, s2.13, s2.14, s2.15 **does not have statistically significance correlation.**
- The relationship between statement s2.8 and statements s2.11, s2.13, s2.14, s2.15 has **p** values 0.208, 0.758, 0.586, 0.586, 0.257 and these **p** values are

above **0.05** and it indicates the statement s2.7 with statements s2.11, s2.13, s2.14, s2.15 **does not have statistically significance correlation.**

- The relationship between statement p2.8 and statement s2.12 has **p** value 0.028 and this **p** value is less than **0.05** and it indicates the statement s2.8 with statement s2.12 **have statistically significance correlation.** The +Ve sign in front of s2.12 indicates positive correlation. Pearson product correlation coefficient **r** value 0.236 indicates moderate correlation between them.
- The relationship between statement s2.9 and statements s2.11, s2.12, s2.13, s2.14, s2.15 has **p** values 0.186, 0.978, 0.105, 0.506, 0.205 and these **p** values are above **0.05** and it indicates the statement s2.9 with statements s2.11, s2.12, s2.13, s2.14, s2.15 **does not have statistically significance correlation.**
- The relationship between statement s2.10 and statements s2.13, s2.14, s2.15 has **p** values 0.529, 0.297, 0.252 and these **p** values are above **0.05** and it indicates the statement s2.10 with statements, s2.13, s2.14, s2.15 **does not have statistically significance correlation.**
- The study statement p2.10 with statements s2.11, s2.12, has **p** values 0.012, 0.020, and these **p** values are less than **0.05** and it indicates the statement s2.10 with statements s2.11, s.12, **have statistically significance correlation.** The -Ve sign in front of s2.11, s2.12, indicate negative correlation. Pearson product correlation coefficient **r** values 0.269, 0.249 indicate moderate correlation between them.

4.6.4.5 Correlations of Coded elements s2.6 to s2.10 and s2.16 to s2.20

Table 4.3.8: Correlations of Coded element s2.6 to s2.10 and s2.16 to s2.20

		Correlations				
		s2.16	s2.17	s2.18	s2.19	s2.20
s2.6	Pearson Correlation	.036	.068	.045	-.179	.231*
	Sig. (2-tailed)	.740	.532	.679	.100	.032
	N	86	86	86	86	86
s2.7	Pearson Correlation	.132	-.138	.155	.201	-.171
	Sig. (2-tailed)	.222	.203	.153	.062	.114
	N	87	87	87	87	87
s2.8	Pearson Correlation	.052	.105	-.023	-.084	.184
	Sig. (2-tailed)	.635	.333	.833	.438	.087
	N	87	87	87	87	87
s2.9	Pearson Correlation	.048	.155	.094	-.089	.128
	Sig. (2-tailed)	.663	.154	.387	.413	.242
	N	86	86	86	86	86
s2.10	Pearson Correlation	.084	.013	.005	.424**	-.105
	Sig. (2-tailed)	.441	.905	.966	.000	.331
	N	87	87	87	87	87

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

The analysis of the tables indicates the following:

- The relation of statement s2.6 with statements s2.16, s2.17, s2.18, s2.19, has **p** values 0.740, 0.532, 0.679, 0.440, 0.100, and these **p** values are above **0.05** and it indicates the statement s2.6 with statements s2.16, s2.17, s2.18, s2.19 **does not have statistically significance correlation.**
- The relation of statement p2.6 with statements s2.20 has **p** values 0.032 the **p** value is less than **0.05** and it indicates the statement s2.6 with statement s2.20 **have statistically significance correlation.** The +Ve sign in front of s2.20 indicates positive correlation. Pearson product correlation coefficient **r** values 0.231 indicates moderate correlation between them.
- The relation of statement s2.7 with statements s2.16, s2.17, s2.18, s2.19, s2.20 has **p** values 0.222, 0.203, 0.153, 0.062, 0.114 and these **p** values are above **0.05** and it indicates the statement s2.7 with statements s2.16, s2.17, s2.18, s2.19, s2.20 **does not have statistically significance correlation.**

- The relation of statement s2.8 with statements s2. 16, s2.17, s2.18, s2.19, s2.20 has **p** values 0.635, 0.333, 0.833, 0.438, 0.087 and these **p** values are above **0.05** and it indicates the statement s2.8 with statements s2.16, s2.17, s2.18, s2.19, s2.20 **does not have statistically significance correlation.**
- The relation of statement s2.9 with statements s2.16, s2.17, s2.18, s2.19, s2.20 has **p** values 0.663, 0.154, 0.387, 0.413, 0.242 and these **p** values are above **0.05** and it indicates the statement s2.9 with statements, s2.16, s2.17, s2.18, s2.19, s2.20 **does not have statistically significance correlation.**
- The relation of statement s2.10 with statements s2.16, s2.17, s2.18, s2.20 has **p** values 0.441, 0.905, .0.966, 0.331 and these **p** values are above **0.05** and it indicates the statement s2.9 with statements, s2.16, s2.17, s2.18, s2.20 **does not have statistically significance correlation.**
- The relation of statement p2.10 with statements s2.19 has **p** values 0.000, and the **p** value is less than **0.05** and it indicates the statement s2.10 with statements s2.19 **have statistically significance correlation.** The +Ve sign in front of s2.19, indicates positive correlation. Pearson product correlation coefficient **r** values 0.424 indicate moderate correlation between them.

4.6.4.6 Correlations of Coded elements s2.11 to s2.15 and s2.16 to s2.20

Table 4.3.9: Correlations of Coded element s2.11 to s2.15 and s2.16 to s2.20

		Correlations				
		s2.16	s2.17	s2.18	s2.19	s2.20
s2.11	Pearson Correlation	-.081	.169	-.016	-.355**	.333**
	Sig. (2-tailed)	.456	.118	.883	.001	.002
	N	87	87	87	87	87
s2.12	Pearson Correlation	.131	-.074	.210	.182	-.112
	Sig. (2-tailed)	.228	.494	.050	.092	.302
	N	87	87	87	87	87
s2.13	Pearson Correlation	.246*	.039	.211*	.073	.132
	Sig. (2-tailed)	.021	.720	.050	.501	.222
	N	87	87	87	87	87
s2.14	Pearson Correlation	-.119	-.047	.060	.007	.197
	Sig. (2-tailed)	.273	.667	.584	.951	.067
	N	87	87	87	87	87
s2.15	Pearson Correlation	-.208	-.184	.163	-.065	-.185
	Sig. (2-tailed)	.053	.088	.132	.550	.087
	N	87	87	87	87	87

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

The analysis of the tables indicates the following:

- The relationship of statement s2.11 with statements s2.16, s2.17, s2.18, has **p** values 0.456, 0.118, 0.883, and these **p** values are above **0.05** and it indicates the statement s2.11 with statements s2.16, s2.17, s2.18, **does not have statistically significance correlation.**
- The relationship of statement p2.11 with statements s2.19, s2.20 have **p** values 0.001, 0.002 , and the **p** values are less than **0.05** and it indicate the statement s2.19 with statements s2.20 **have statistically significance correlation.** The +Ve sign in front of s2.20, indicates positive correlation and the-Ve sign in front of s2.19, indicates negative correlation. Pearson product correlation coefficient **r** values 0.333, 0.355 indicate moderate correlation between them.

- The relationship of statement p2.12 with statements s2.16, s2.17, s2.19, s2.20 has **p** values 0.228, 0.494, 0.092, 0.302, and these **p** values are above **0.05** and it indicates the statement s2.16, s2.17, s2.19, s2.20 **does not have statistically significance correlation.**
- The relationship of statement p2.12 with statements s2.18 has **p** values 0.050, and the **p** value is less than **0.05** and it indicates the statement s2.12 with statements s2.18 **have statistically significance correlation.** The +Ve sign in front of s2.18, indicates positive correlation. Pearson product correlation coefficient **r** value 0.210, indicates moderate correlation between them.
- The relationship of statement p2.13 with statements s2.17, s2.19, and s2.20 has **p** values 0.720, 0.501, 222 and these **p** values are above **0.05** and it indicates statement p2.13 with statements s2.17, s2.19, and s2.20 **does not have statistically significance correlation.**
- The relationship of statement p2.13 with statements s2.16, s2.18 have **p** values 0.021, 0.050, and the **p** values are less than **0.05** and it indicate the statement s2.16 with statements s2.18 **have statistically significance correlation.** The +Ve sign in front of s2.18, indicates positive correlation. Pearson product correlation coefficient **r** values 0.246, 0.211, indicate moderate correlation between them.
- The relationship of statement p2.14 with statements s2.16, s2.17, s2.18, s2.19, s2.20 has **p** values 0.273, 0.667, 0.584, 0.951, 0.067 and these **p** values are above **0.05** and it indicates the statement s2.14 with statements s2.16, s2.17, s2.18, s2.19, and s2.20 **does not have statistically significance correlation.**
- The relationship of statement p2.15 with statements s2.16, s2.17, s2.18, s2.19, s2.20 has **p** values 0.053, 0.088, 0.132, 0.550, 0.087 and these **p** values are above **0.05** and it indicates statement s2.15 with statements s2.16, s2.17, s2.18, s2.19, s2.20 **does not have statistically significance correlation**

4.6.5. Data Analysis Using the Chi-Square Test

The discussion on the Chi Square Tests, the details in the preceding chapter, pointed to two rules of interpretation:

1. If **p** value is less than or equal **p ≤ 0.05**, there is statistically Significance relationship;
2. If **p** value is greater than **p > 0.05**, there is **NO** statistically Significance relationship.

4.6.5.1 Chi-Square Test of Variables s1.1 and s1.2

s1.1: What type of property do you occupy * **s1.2:** How is the physical appearance of the property

Table 4.4.0: Chi-Square Test of Variables s1.1 and s1

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	19.905	9	.019
N of Valid Cases	86		

The above Chi-square (χ) test result indicates **p** value is 0.019, which is below 0.05, this result reveals there is **statistically significance relationship** between statements s1.1: type of property occupation and s1.2: physical appearance, these two variables are associated, dependent each other

4.6.5.2 Chi-Square Test of Variables s1.1 and s1.3

s1.1: What type of property do you occupy * **s1.3:** For how long have you been occupying the property.

Table 4.4.1: Chi-Square Test of Variables s1.1 and s1.3

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.026	9	.212
N of Valid Cases	86		

The above Chi-square (χ) test result indicates **p** value is 0.212, which is above 0.05, this result reveals there is **no statistically significance relationship** between statements s1.1: type of property occupation and s1.3: Duration, These two variables are not associated, independent each other

4.6.5.3 Chi-Square Test of Variables s1.1 and s1.4

s1.1: What type of property do you occupy * **s1.4:** How are the service quality standards.

Table 4.4.2: Chi-Square Test of Variables s1.1 and s1.4

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.864	9	.846
N of Valid Cases	86		

The above Chi-square (χ) test result indicates **p** value is 0.846, which is above 0.05, this result reveals there is **no statistically significance relationship** between statements s1.1: type of property occupation and s1.4: type of service quality standards, these two variables are not associated, independent each other

4.6.5.4 Chi-Square Test of Variables s1.1 and s1.6

s1.1: What type of property do you occupy * **s1.6:** Does the DPW able to perform the promised service.

Table 4.4.3: Chi-Square Test of Variables s1.1 and s1.6

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15.435	9	.080
N of Valid Cases	86		

The above Chi-square (χ) test result indicates **p** value is 0.080, which is above 0.05, this result reveals there is **no statistically significance relationship** between statements s1.1: type of property occupation and s1.6: ability to perform the promised service, these two variables are not associated, independent each other

4.6.5.5 Chi-Square Test of Variables s1.1 and s1.7

s1.1: What type of property do you occupy * **s1.7:** How long does DPW take to respond on the complaints.

Table 4.4.4: Chi-Square Test of Variables s1.1 and s1.7

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.455	12	.337
N of Valid Cases	86		

The above Chi-square (χ) test result indicates **p** value is 0.337, which is above 0.05, this result reveals there is **no statistically significance relationship** between statements s1.1: type of property occupation and s1.7:the period DPW takes in responding to the complaint, these two variables are not associated, independent each other

4.6.5.6 Chi-Square Test of Variables s1.1 and s1.9

s1.1: What type of property do you occupy * s1.9: How does DPW treat you as an individual in your needs.

Table 4.4.5: Chi-Square Test of Variables s1.1 and s1.9

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.957	12	.707
N of Valid Cases	86		

The above Chi-square (χ) test result indicates p value is 0.707, which is above 0.05, this result reveals there is **no statistically significance relationship** between statements s1.1: type of property occupation and s1.9: the type of treatment as an individual's needs, these two variables are not associated, independent each other

4.6.5.7 Chi-Square Test of Variables s1.4 and s1.5

s1.4: How are the service quality standards* s1.5: How reliable is the service rendered to you.

Table 4.4.6: Chi-Square Test of Variables s1.4 and s1.5

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	20.242	12	.063
N of Valid Cases	87		

The above Chi-square (χ) test result indicates p value is 0.063, which is above 0.05, this result reveals there is **no statistically significance relationship** between statements s1.4: type of service quality standards rendered and s1.5: reliability of service rendered. These two variables are not associated, independent each other.

Annexure B: Data Analysis in Details-Dispersion

4.7 Data Analysis: Dispersion

The analysis of the data to determine the level of dispersion is done based on the gender group, age group, type of property and marital status. The assumption is that the results of the analysis based on these variables may reflect the trends of dispersion of the rest of the variables. It would have been prudent to cover all the variables, but the limitation research takes root.

4.7.1 Comparison Dispersion Statistics – Gender Group

4.7.1.1 Comparison between s2.1: The DPW Provides world class properties

* b2: Your gender group Cross tabulation.

Table 4.4.7: Comparison Dispersion Statistics - s2.1 * b2

% of Total

		b2: Your gender group		Total dispersion
		Male	Female	
s2.1:The DPW Provides world class properties	Strongly Disagree	8.0%	10.3%	18.4%
	Disagree	11.5%	9.2%	20.7%
	Neutral	20.7%	9.2%	29.9%
	Agree	3.4%	6.9%	10.3%
	Strongly Agree	6.9%	13.8%	20.7%
Total		50.6%	49.4%	100.0%

The above table results reveal comparison dispersion results of respondents' perceptions as per gender groups' wise, table results clearly exhibit dispersion of different group's respondents

4.7.1.2 Comparison between s2.2: The DPW has modern and clean properties * b2: Your gender group Cross tabulation.

Table 4.4.8: Comparison Dispersion Statistics - s2.2 * b2

% of Total

		b2: Your gender group		Total
		Male	Female	dispersion
s2.2: The DPW has modern and clean properties	Strongly Disagree	3.4%	9.2%	12.6%
	Disagree	13.8%	14.9%	28.7%
	Neutral	19.5%	18.4%	37.9%
	Agree	5.7%	3.4%	9.2%
	Strongly Agree	8.0%	3.4%	11.5%
Total		50.6%	49.4%	100.0%

4.7.1.3 Comparison between s2.3: The DPW provides variety and quality equipments * b2: Your gender group Cross tabulation.

Table 4.4.9: Comparison Dispersion Statistics - s2.3 * b2

% of Total

		b2: Your gender group		Total
		Male	Female	dispersion
s2.3: The DPW provides variety and quality equipments	Strongly Disagree	2.3%	10.5%	12.8%
	Disagree	15.1%	4.7%	19.8%
	Neutral	19.8%	8.1%	27.9%
	Agree	11.6%	19.8%	31.4%
	Strongly Agree	2.3%	5.8%	8.1%
Total		51.2%	48.8%	100.0%

4.7.1.4 Comparison between s2.4: The DPW provides variety and choices of properties * b2: Your gender group Cross tabulation.

Table 4.5.0: Comparison Dispersion Statistics - s2.4 * b2

% of Total

		b2: Your gender group		Total
		Male	Female	dispersion
s2.4: The DPW provides variety and choices of properties	Strongly Disagree	9.3%	11.6%	20.9%
	Disagree	10.5%	11.6%	22.1%
	Neutral	8.1%	15.1%	23.3%
	Agree	10.5%	9.3%	19.8%
	Strongly Agree	11.6%	2.3%	14.0%
Total		50.0%	50.0%	100.0%

4.7.1.5 Comparison between s2.5: The DPW performs the service quality for

the first time * b2: Your gender group Cross tabulation.

Table 4.5.1: Comparison Dispersion Statistics - s2.5 * b2

% of Total

		b2: Your gender group		Total
		Male	Female	dispersion
s2.5: The DPW performs the service quality for the first time	Strongly Disagree	10.5%	8.1%	18.6%
	Disagree	11.6%	10.5%	22.1%
	Neutral	17.4%	9.3%	26.7%
	Agree	7.0%	12.8%	19.8%
	Strongly Agree	3.5%	9.3%	12.8%
Total		50.0%	50.0%	100.0%

4.7.1.6 Comparison between s2.6: The DPW provides property services consistently * b2: Your gender group Cross tabulation.

Table 4.5.2: Comparison Dispersion Statistics - s2.6 * b2

% of Total

		b2: Your gender group		Total
		Male	Female	dispersion
s2.6: The DPW provides property services consistently	Strongly Disagree	10.5%	9.3%	19.8%
	Disagree	9.3%	3.5%	12.8%
	Neutral	10.5%	14.0%	24.4%
	Agree	15.1%	10.5%	25.6%
	Strongly Agree	5.8%	11.6%	17.4%
Total		51.2%	48.8%	100.0%

4.7.1.7. Comparison between s2.7: The DPW provides remedial procedures for emergency repairs * b2: Your gender group Cross tabulation.

Table 4.5.3: Comparison Dispersion Statistics - s2.7 * b2

% of Total

		b2: Your gender group		Total
		Male	Female	dispersion
s2.7: The DPW provides remedial procedures for emergency repairs	Strongly Disagree	5.7%	9.2%	14.9%
	Disagree	11.5%	11.5%	23.0%
	Neutral	9.2%	16.1%	25.3%
	Agree	14.9%	5.7%	20.7%
	Strongly Agree	9.2%	6.9%	16.1%
Total		50.6%	49.4%	100.0%

4.7.1.8 Comparison between s2.8: The DPW provides reliable maintenance *

b2: Your gender group Cross tabulation.

Table 4.5.4: Comparison Dispersion Statistics - s2.8 * b2

% of Total

		b2: Your gender group		Total
		Male	Female	dispersion
s2.8: The DPW provides reliable maintenance	Strongly Disagree	10.3%	4.6%	14.9%
	Disagree	9.2%	11.5%	20.7%
	Neutral	13.8%	11.5%	25.3%
	Agree	9.2%	14.9%	24.1%
	Strongly Agree	8.0%	6.9%	14.9%
Total		50.6%	49.4%	100.0%

4.7.1.9. Comparison between s2.9: The DPW employees provide prompt respond to your request or complaint * b2: Your gender group Cross tabulation.

Table 4.5.5: Comparison Dispersion Statistics - s2.9 * b2

% of Total

		b2: Your gender group		Total
		Male	Female	dispersion
s2.9: The DPW employees provides prompt respond to your request or complaint	Strongly Disagree	4.7%	7.0%	11.6%
	Disagree	12.8%	9.3%	22.1%
	Neutral	17.4%	18.6%	36.0%
	Agree	11.6%	7.0%	18.6%
	Strongly Agree	4.7%	7.0%	11.6%
Total		51.2%	48.8%	100.0%

4.7.2. Comparison between s2.10: The DPW provides prompt attention to your specific needs * b2: Your gender group Cross tabulation.

Table 4.5.6: Comparison Dispersion Statistics - s2.10 * b2

% of Total

		b2: Your gender group		Total
		Male	Female	dispersion
s2.10: The DPW provides prompt attention to your specific needs	Strongly Disagree	6.9%	10.3%	17.2%
	Disagree	10.3%	9.2%	19.5%
	Neutral	14.9%	18.4%	33.3%
	Agree	11.5%	9.2%	20.7%
	Strongly Agree	6.9%	2.3%	9.2%
Total		50.6%	49.4%	100.0%

4.7.2.1. Comparison between s2.11: The DPW understands your specific needs * b2: Your gender group Cross tabulation.

Table 4.5.7: Comparison Dispersion Statistics - s2.11 * b2

% of Total

		b2: Your gender group		Total
		Male	Female	dispersion
s2.11: The DPW understands your specific needs	Strongly Disagree	6.9%	3.4%	10.3%
	Disagree	9.2%	9.2%	18.4%
	Neutral	18.4%	17.2%	35.6%
	Agree	10.3%	11.5%	21.8%
	Strongly Agree	5.7%	8.0%	13.8%
Total		50.6%	49.4%	100.0%

4.7.2.2. Comparison between s2.12: The DPW keeps you informed about when services will be performed * b2: Your gender group Cross tabulation

Table 4.5.8: Comparison Dispersion Statistics - s2.12 * b2

% of Total

		b2: Your gender group		Total
		Male	Female	dispersion
s2.12: The DPW keeps you informed about when services will be performed	Strongly Disagree	13.8%	8.0%	21.8%
	Disagree	9.2%	8.0%	17.2%
	Neutral	11.5%	14.9%	26.4%
	Agree	9.2%	13.8%	23.0%
	Strongly Agree	6.9%	4.6%	11.5%
Total		50.6%	49.4%	100.0%

4.7.2.3. Comparison between s2.13: The DPW provides sincerity & patience in resolving your problems * b2: Your gender group Cross tabulation.

Table 4.5.9: Comparison Dispersion Statistics - s2.13 * b2

% of Total

		b2: Your gender group		Total
		Male	Female	dispersion
s2.13: The DPW provides sincerity & patience in resolving your problems	Strongly Disagree	6.9%	10.3%	17.2%
	Disagree	6.9%	9.2%	16.1%
	Neutral	20.7%	16.1%	36.8%
	Agree	12.6%	9.2%	21.8%
	Strongly Agree	3.4%	4.6%	8.0%
Total		50.6%	49.4%	100.0%

4.7.2.4. Comparison between s2.14: The DPW provides safety performance of the property * b2: Your gender group Cross tabulation.

Table 4.6.0: Comparison Dispersion Statistics - s2.14 * b2

% of Total

		b2: Your gender group		Total
		Male	Female	dispersion
s2.14: The DPW provides safety performance of the property	Strongly Disagree	5.7%	8.0%	13.8%
	Disagree	16.1%	5.7%	21.8%
	Neutral	12.6%	21.8%	34.5%
	Agree	12.6%	6.9%	19.5%
	Strongly Agree	3.4%	6.9%	10.3%
Total		50.6%	49.4%	100.0%

4.7.2.5. Comparison s2.15: The DPW employees are knowledgeable to answer customer questions * b2: Your gender group Cross tabulation.

Table 4.6.1: Comparison Dispersion Statistics - s2.15 * b2

% of Total

		b2: Your gender group		Total
		Male	Female	dispersion
s2.15: The DPW employees are knowledgeable to answer customer questions	Strongly Disagree	6.9%	8.0%	14.9%
	Disagree	8.0%	8.0%	16.1%
	Neutral	14.9%	13.8%	28.7%
	Agree	14.9%	18.4%	33.3%
	Strongly Agree	5.7%	1.1%	6.9%
Total		50.6%	49.4%	100.0%

4.7.2.6. Comparison s2.16: The DPW employees are consistently courteous * b2: Your gender group Cross tabulation.

Table 4.6.2: Comparison Dispersion Statistics - s2.16 * b2

% of Total

		b2: Your gender group		Total
		Male	Female	dispersion
s2.16: The DPW employees are consistently courteous	Strongly Disagree	4.6%	4.6%	9.2%
	Disagree	6.9%	11.5%	18.4%
	Neutral	18.4%	14.9%	33.3%
	Agree	14.9%	11.5%	26.4%
	Strongly Agree	5.7%	6.9%	12.6%
Total		50.6%	49.4%	100.0%

4.7.2.7. Comparison s2.17: The DPW provides convenient maintenance schedule * b2: Your gender group Cross tabulation.

Table 4.6.3: Comparison Dispersion Statistics - s2.17 * b2

% of Total

		b2: Your gender group		Total
		Male	Female	dispersion
s2.17: The DPW provides convenient maintenance schedule	Strongly Disagree	5.7%	10.3%	16.1%
	Disagree	13.8%	6.9%	20.7%
	Neutral	16.1%	16.1%	32.2%
	Agree	10.3%	9.2%	19.5%
	Strongly Agree	4.6%	6.9%	11.5%
Total		50.6%	49.4%	100.0%

4.7.2.8. Comparison s2.18: The DPW provides frequent maintenance service by artisans * b2: Your gender group Cross tabulation.

Table 4.6.4: Comparison Dispersion Statistics - s2.18 * b2

% of Total

		b2: Your gender group		Total
		Male	Female	dispersion
s2.18: The DPW provides frequent maintenance service by artisans	Strongly Disagree	6.9%	5.7%	12.6%
	Disagree	10.3%	13.8%	24.1%
	Neutral	11.5%	9.2%	20.7%
	Agree	10.3%	12.6%	23.0%
	Strongly Agree	11.5%	8.0%	19.5%
Total		50.6%	49.4%	100.0%

4.7.2.9. Comparison s2.19: The DPW has spontaneous care & concern for your needs * b2: Your gender group Cross tabulation.

Table 4.6.5: Comparison Dispersion Statistics - s2.19 * b2

% of Total

		b2: Your gender group		Total
		Male	Female	dispersion
s2.19: The DPW has spontaneous care & concern for your needs	Strongly Disagree	9.2%	8.0%	17.2%
	Disagree	17.2%	16.1%	33.3%
	Neutral	13.8%	17.2%	31.0%
	Agree	5.7%	3.4%	9.2%
	Strongly Agree	4.6%	4.6%	9.2%
Total		50.6%	49.4%	100.0%

4.7.3. Comparison s2.20: The DPW has a sound loyalty programme to recognize you as a frequent customer * b2: Your gender group Cross tabulation.

Table 4.6.6: Comparison Dispersion Statistics - s2.19 * b2

% of Total

		b2: Your gender group		Total
		Male	Female	dispersion
s2.20: The DPW has a sound loyalty programme to recognize you as a frequent customer	Strongly Disagree	2.3%	4.6%	6.9%
	Disagree	8.0%	4.6%	12.6%
	Neutral	6.9%	17.2%	24.1%
	Agree	23.0%	13.8%	36.8%
	Strongly Agree	10.3%	9.2%	19.5%
Total		50.6%	49.4%	100.0%

4.7.4. Comparison Dispersion Statistics - Age groups

4.7.4.1. Comparison s2.1: The DPW Provides world class properties * b1: Your age group Cross tabulation.

Table 4.6.7: Comparison Dispersion Statistics - s2.1 * b1

% of Total

		b1: Your age group				Total
		21 - 30 yrs	31 - 40 yrs	41 - 50 yrs	51 - 60 yrs	dispersion
s2.1:The DPW Provides world class properties	Strongly Disagree	5.7%	6.9%	5.7%		18.4%
	Disagree	6.9%	8.0%	4.6%	1.1%	20.7%
	Neutral	5.7%	16.1%	8.0%		29.9%
	Agree	2.3%	4.6%	3.4%		10.3%
	Strongly Agree	5.7%	6.9%	8.0%		20.7%
Total		26.4%	42.5%	29.9%	1.1%	100.0%

The above table results reveal comparison dispersion results of respondents' perceptions as per age groups wise, table results clearly exhibit dispersion of different group's respondents

4.7.4.2. Comparison s2.2: The DPW has modern and clean properties * b1: Your age group Cross tabulation

Table 4.6.8: Comparison Dispersion Statistics - s2.2 * b1

% of Total

	b1: Your age group				Total
	21 - 30 yrs	31 - 40 yrs	41 - 50 yrs	51 - 60 yrs	dispersion
s2.2: The DPW has modern and clean properties					
Strongly Disagree	3.4%	6.9%	2.3%		12.6%
Disagree	4.6%	14.9%	8.0%	1.1%	28.7%
Neutral	11.5%	10.3%	16.1%		37.9%
Agree	2.3%	4.6%	2.3%		9.2%
Strongly Agree	4.6%	5.7%	1.1%		11.5%
Total	26.4%	42.5%	29.9%	1.1%	100.0%

4.7.4.3. Comparison s2.3: The DPW provides variety and quality equipments

*** b1: Your age group Cross tabulation.**

Table 4.6.9: Comparison Dispersion Statistics - s2.3 * b1

% of Total

	b1: Your age group				Total
	21 - 30 yrs	31 - 40 yrs	41 - 50 yrs	51 - 60 yrs	dispersion
s2.3: The DPW provides variety and quality equipments					
Strongly Disagree	1.2%	7.0%	4.7%		12.8%
Disagree	7.0%	3.5%	8.1%	1.2%	19.8%
Neutral	8.1%	16.3%	3.5%		27.9%
Agree	5.8%	12.8%	12.8%		31.4%
Strongly Agree	3.5%	3.5%	1.2%		8.1%
Total	25.6%	43.0%	30.2%	1.2%	100.0%

4.7.4.4. Comparison of s2.4: The DPW provides variety and choices of properties * b1: Your age group Cross tabulation.

Table 4.7.0: Comparison Dispersion Statistics - s2.4 * b1

% of Total

	b1: Your age group				Total
	21 - 30 yrs	31 - 40 yrs	41 - 50 yrs	51 - 60 yrs	dispersion
s2.4: The DPW provides variety and choices of properties					
Strongly Disagree	5.8%	11.6%	3.5%		20.9%
Disagree	5.8%	7.0%	8.1%	1.2%	22.1%
Neutral	5.8%	10.5%	7.0%		23.3%
Agree	5.8%	9.3%	4.7%		19.8%
Strongly Agree	3.5%	4.7%	5.8%		14.0%
Total	26.7%	43.0%	29.1%	1.2%	100.0%

4.7.4.5. Comparison of s2.5: The DPW performs the service quality for the first time * b1: Your age group Cross tabulation.

Table 4.7.1: Comparison Dispersion Statistics - s2.5 * b1

% of Total

	b1: Your age group				Total
	21 - 30 yrs	31 - 40 yrs	41 - 50 yrs	51 - 60 yrs	dispersion
s2.5: The DPW performs the service quality for the first time	7.0%	5.8%	5.8%		18.6%
Strongly Disagree					
Disagree	4.7%	8.1%	8.1%	1.2%	22.1%
Neutral	8.1%	12.8%	5.8%		26.7%
Agree	5.8%	8.1%	5.8%		19.8%
Strongly Agree	1.2%	7.0%	4.7%		12.8%
Total	26.7%	41.9%	30.2%	1.2%	100.0%

4.7.4.6. Comparison of s2.6: The DPW provides property services consistently * b1: Your age group Cross tabulation.

Table 4.7.2: Comparison Dispersion Statistics - s2.6 * b1

% of Total

	b1: Your age group				Total
	21 - 30 yrs	31 - 40 yrs	41 - 50 yrs	51 - 60 yrs	dispersion
s2.6: The DPW provides property services consistently	7.0%	7.0%	5.8%		19.8%
Strongly Disagree					
Disagree	2.3%	7.0%	2.3%	1.2%	12.8%
Neutral	5.8%	8.1%	10.5%		24.4%
Agree	7.0%	12.8%	5.8%		25.6%
Strongly Agree	4.7%	7.0%	5.8%		17.4%
Total	26.7%	41.9%	30.2%	1.2%	100.0%

4.7.4.7. Comparison of s2.7: The DPW provides remedial procedures for emergency repairs * b1: Your age group Cross tabulation.

Table 4.7.3: Comparison Dispersion Statistics - s2.7 * b1

% of Total

		b1: Your age group				Total
		21 - 30 yrs	31 - 40 yrs	41 - 50 yrs	51 - 60 yrs	dispersion
s2.7: The DPW provides remedial procedures for emergency repairs	Strongly Disagree	2.3%	6.9%	5.7%		14.9%
	Disagree	5.7%	8.0%	8.0%	1.1%	23.0%
	Neutral	4.6%	16.1%	4.6%		25.3%
	Agree	8.0%	8.0%	4.6%		20.7%
	Strongly Agree	5.7%	3.4%	6.9%		16.1%
Total		26.4%	42.5%	29.9%	1.1%	100.0%

4.7.4.8. Comparison of s2.8: The DPW provides reliable maintenance * b1: Your age group Cross tabulation.

Table 4.7.4: Comparison Dispersion Statistics - s2.8 * b1

% of Total

		b1: Your age group				Total
		21 - 30 yrs	31 - 40 yrs	41 - 50 yrs	51 - 60 yrs	dispersion
s2.8: The DPW provides reliable maintenance	Strongly Disagree	3.4%	4.6%	6.9%		14.9%
	Disagree	3.4%	9.2%	6.9%	1.1%	20.7%
	Neutral	8.0%	10.3%	6.9%		25.3%
	Agree	4.6%	14.9%	4.6%		24.1%
	Strongly Agree	6.9%	3.4%	4.6%		14.9%
Total		26.4%	42.5%	29.9%	1.1%	100.0%

4.7.4.9. Comparison of s2.9: The DPW employees provide prompt respond to your request or complaint * b1: Your age group Cross tabulation.

Table 4.7.5: Comparison Dispersion Statistics - s2.9 * b1

% of Total

		b1: Your age group				Total
		21 - 30 yrs	31 - 40 yrs	41 - 50 yrs	51 - 60 yrs	dispersion
s2.9: The DPW employees provides prompt respond to your request or complaint	Strongly Disagree	5.8%	2.3%	3.5%		11.6%
	Disagree	4.7%	8.1%	8.1%	1.2%	22.1%
	Neutral	9.3%	17.4%	9.3%		36.0%
	Agree	4.7%	8.1%	5.8%		18.6%
	Strongly Agree	2.3%	7.0%	2.3%		11.6%
Total		26.7%	43.0%	29.1%	1.2%	100.0%

4.7.5. Comparison of s2.10: The DPW provides prompt attention to your specific needs * b1: Your age group Cross tabulation.

Table 4.7.6: Comparison Dispersion Statistics - s2.10 * b1

% of Total

		b1: Your age group				Total
		21 - 30 yrs	31 - 40 yrs	41 - 50 yrs	51 - 60 yrs	dispersion
s2.10: The DPW provides prompt attention to your specific needs	Strongly Disagree	3.4%	10.3%	3.4%		17.2%
	Disagree	4.6%	6.9%	6.9%	1.1%	19.5%
	Neutral	9.2%	12.6%	11.5%		33.3%
	Agree	3.4%	9.2%	8.0%		20.7%
	Strongly Agree	5.7%	3.4%			9.2%
Total		26.4%	42.5%	29.9%	1.1%	100.0%

4.7.5.1. Comparison of s2.11: The DPW understands your specific needs * b1: Your age group Cross tabulation.

Table 4.7.7: Comparison Dispersion Statistics - s2.11 * b1

% of Total

				b1: Your age group				Total
				21 - 30 yrs	31 - 40 yrs	41 - 50 yrs	51 - 60 yrs	dispersion
s2.11:	The DPW	Strongly Disagree		4.6%	3.4%	2.3%		10.3%
		Disagree		2.3%	9.2%	5.7%	1.1%	18.4%
		Neutral		8.0%	13.8%	13.8%		35.6%
		Agree		8.0%	8.0%	5.7%		21.8%
		Strongly Agree		3.4%	8.0%	2.3%		13.8%
Total				26.4%	42.5%	29.9%	1.1%	100.0%

4.7.5.2. Comparison of s2.12: The DPW keeps you informed about when services will be performed * b1: Your age group Cross tabulation.

Table 4.7.8: Comparison Dispersion Statistics - s2.12 * b1

% of Total

				b1: Your age group				Total
				21 - 30 yrs	31 - 40 yrs	41 - 50 yrs	51 - 60 yrs	dispersion
s2.12:	The DPW	Strongly Disagree		9.2%	6.9%	5.7%		21.8%
		Disagree		2.3%	8.0%	5.7%	1.1%	17.2%
		Neutral		8.0%	12.6%	5.7%		26.4%
		Agree		2.3%	10.3%	10.3%		23.0%
		Strongly Agree		4.6%	4.6%	2.3%		11.5%
Total				26.4%	42.5%	29.9%	1.1%	100.0%

4.7.5.3. Comparison of s2.13: The DPW provides sincerity & patience in resolving your problems * b1: Your age group Cross tabulation.

Table 4.7.9: Comparison Dispersion Statistics - s2.13 * b1

% of Total

				b1: Your age group				Total
				21 - 30 yrs	31 - 40 yrs	41 - 50 yrs	51 - 60 yrs	dispersion
s2.13:	The DPW	Strongly Disagree		2.3%	11.5%	3.4%		17.2%
		Disagree		4.6%	5.7%	4.6%	1.1%	16.1%
		Neutral		9.2%	12.6%	14.9%		36.8%
		Agree		9.2%	8.0%	4.6%		21.8%
		Strongly Agree		1.1%	4.6%	2.3%		8.0%
Total				26.4%	42.5%	29.9%	1.1%	100.0%

4.7.5.4. Comparison of s2.14: The DPW provides safety performance of the property * b1: Your age group Cross tabulation.

Table 4.8.0: Comparison Dispersion Statistics - s2.14 * b1

% of Total

	b1: Your age group				Total
	21 - 30 yrs	31 - 40 yrs	41 - 50 yrs	51 - 60 yrs	dispersion
s2.14: The DPW provides safety performance of the property	2.3%	6.9%	4.6%		13.8%
Strongly Disagree					
Disagree	8.0%	5.7%	6.9%	1.1%	21.8%
Neutral	8.0%	17.2%	9.2%		34.5%
Agree	5.7%	9.2%	4.6%		19.5%
Strongly Agree	2.3%	3.4%	4.6%		10.3%
Total	26.4%	42.5%	29.9%	1.1%	100.0%

4.7.5.5. Comparison of s2.15: The DPW employees are knowledgeable to answer customer questions * b1: Your age group Cross tabulation.

Table 4.8.1: Comparison Dispersion Statistics - s2.15 * b1

% of Total

	b1: Your age group				Total
	21 - 30 yrs	31 - 40 yrs	41 - 50 yrs	51 - 60 yrs	dispersion
s2.15: The DPW employees are knowledgeable to answer customer questions	5.7%	5.7%	3.4%		14.9%
Strongly Disagree					
Disagree	4.6%	6.9%	3.4%	1.1%	16.1%
Neutral	6.9%	12.6%	9.2%		28.7%
Agree	8.0%	13.8%	11.5%		33.3%
Strongly Agree	1.1%	3.4%	2.3%		6.9%
Total	26.4%	42.5%	29.9%	1.1%	100.0%

4.7.5.6. Comparison of s2.16: The DPW employees are consistently courteous * b1: Your age group Cross tabulation.

Table 4.8.2: Comparison Dispersion Statistics - s2.16 * b1

% of Total

	b1: Your age group				Total
	21 - 30 yrs	31 - 40 yrs	41 - 50 yrs	51 - 60 yrs	dispersion
s2.16: The DPW employees are consistently courteous	3.4%	4.6%	1.1%		9.2%
Strongly Disagree	3.4%	10.3%	3.4%	1.1%	18.4%
Disagree	5.7%	16.1%	11.5%		33.3%
Neutral	9.2%	6.9%	10.3%		26.4%
Agree	4.6%	4.6%	3.4%		12.6%
Strongly Agree	26.4%	42.5%	29.9%	1.1%	100.0%
Total					

4.7.5.7. Comparison of s2.17: The DPW provides convenient maintenance schedule * b1: Your age group Cross tabulation.

Table 4.8.3: Comparison Dispersion Statistics - s2.17 * b1

% of Total

	b1: Your age group				Total
	21 - 30 yrs	31 - 40 yrs	41 - 50 yrs	51 - 60 yrs	dispersion
s2.17: The DPW provides convenient maintenance schedule	3.4%	9.2%	3.4%		16.1%
Strongly Disagree	6.9%	4.6%	8.0%	1.1%	20.7%
Disagree	6.9%	16.1%	9.2%		32.2%
Neutral	5.7%	8.0%	5.7%		19.5%
Agree	3.4%	4.6%	3.4%		11.5%
Strongly Agree	26.4%	42.5%	29.9%	1.1%	100.0%
Total					

4.7.5.8. Comparison of s2.18: The DPW provides frequent maintenance service by artisans * b1: Your age group Cross tabulation.

Table 4.8.4: Comparison Dispersion Statistics - s2.18 * b1

% of Total

	b1: Your age group				Total
	21 - 30 yrs	31 - 40 yrs	41 - 50 yrs	51 - 60 yrs	dispersion
s2.18: The DPW provides frequent maintenance service by artisans	5.7%	4.6%	2.3%		12.6%
Strongly Disagree	3.4%	12.6%	6.9%	1.1%	24.1%
Disagree	5.7%	9.2%	5.7%		20.7%
Neutral	6.9%	10.3%	5.7%		23.0%
Agree	4.6%	5.7%	9.2%		19.5%
Strongly Agree	26.4%	42.5%	29.9%	1.1%	100.0%
Total					

4.7.5.9. Comparison of s2.19: The DPW has spontaneous care & concern for your needs * b1: Your age group Cross tabulation.

Table 4.8.5: Comparison Dispersion Statistics - s2.19 * b1

% of Total

		b1: Your age group				Total dispersion
		21 - 30 yrs	31 - 40 yrs	41 - 50 yrs	51 - 60 yrs	
s2.19: The DPW has spontaneous care & concern for your needs	Strongly Disagree	4.6%	6.9%	5.7%		17.2%
	Disagree	8.0%	13.8%	10.3%	1.1%	33.3%
	Neutral	8.0%	14.9%	8.0%		31.0%
	Agree	1.1%	5.7%	2.3%		9.2%
	Strongly Agree	4.6%	1.1%	3.4%		9.2%
Total		26.4%	42.5%	29.9%	1.1%	100.0%

4.7.6. Comparison of s2.20: The DPW has a sound loyalty programme to recognize you as a frequent customer * b1: Your age group Cross tabulation.

Table 4.8.6: Comparison Dispersion Statistics - s2.20 * b1

% of Total

		b1: Your age group				Total dispersion
		21 - 30 yrs	31 - 40 yrs	41 - 50 yrs	51 - 60 yrs	
s2.20: The DPW has a sound loyalty programme to recognize you as a frequent customer	Strongly Disagree		3.4%	3.4%		6.9%
	Disagree	3.4%	4.6%	3.4%	1.1%	12.6%
	Neutral	4.6%	9.2%	10.3%		24.1%
	Agree	11.5%	16.1%	9.2%		36.8%
	Strongly Agree	6.9%	9.2%	3.4%		19.5%
Total		26.4%	42.5%	29.9%	1.1%	100.0%

4.7.7. Comparison of Dispersion Statistics - Type of Property

3.4.3.1. Comparison of s2.1: The DPW Provides world class properties * s1.1: What type of property do you occupy Cross tabulation.

Table 4.8.7: Comparison Dispersion Statistics - s2.1 * s1.1

% of Total

			s1.1:What type of property do you occupy				Total
			Flat	Independent Property	Space in Shopping center	Other	dispersion
s2.1:The DPW Provides world class properties	Strongly Disagree		5.8%	8.1%	1.2%	2.3%	17.4%
	Disagree		2.3%	10.5%	5.8%	2.3%	20.9%
	Neutral		9.3%	11.6%	4.7%	4.7%	30.2%
	Agree		2.3%	4.7%	2.3%	1.2%	10.5%
	Strongly Agree		2.3%	3.5%	10.5%	4.7%	20.9%
Total			22.1%	38.4%	24.4%	15.1%	100.0%

The above table results reveal comparison dispersion results of respondents' perceptions as per type of property, the table results clearly exhibit dispersion of different group's respondents.

4.7.7.1. Comparison of s2.2: The DPW has modern and clean properties * s1.1: What type of property do you occupy Cross tabulation.

Table 4.8.8: Comparison Dispersion Statistics- s2.1*s1.1

% of Total

			s1.1:What type of property do you occupy				Total
			Flat	Independent Property	Space in Shopping center	Other	dispersion
s2.2: The DPW has modern and clean properties	Strongly Disagree		3.5%	3.5%	3.5%	1.2%	11.6%
	Disagree		4.7%	16.3%	4.7%	3.5%	29.1%
	Neutral		9.3%	10.5%	11.6%	7.0%	38.4%
	Agree		2.3%	4.7%	2.3%		9.3%
	Strongly Agree		2.3%	3.5%	2.3%	3.5%	11.6%
Total			22.1%	38.4%	24.4%	15.1%	100.0%

4.7.7.2. Comparison of s2.3: The DPW provides variety and quality equipments * s1.1: What type of property do you occupy Cross tabulation.

Table 4.8.9: Comparison Dispersion Statistics - s2.3 * s1.1

% of Total

		s1.1:What type of property do you occupy				Total
		Flat	Independent Property	Space in Shopping center	Other	dispersion
s2.3: The DPW provides variety and quality equipments	Strongly Disagree	2.4%	7.1%	1.2%	1.2%	11.8%
	Disagree	3.5%	9.4%	4.7%	2.4%	20.0%
	Neutral	9.4%	8.2%	7.1%	3.5%	28.2%
	Agree	4.7%	11.8%	10.6%	4.7%	31.8%
	Strongly Agree	2.4%	1.2%	1.2%	3.5%	8.2%
Total		22.4%	37.6%	24.7%	15.3%	100.0%

4.7.7.3. Comparison of s2.4: The DPW provides variety and choices of properties * s1.1: What type of property do you occupy Cross tabulation.

Table 4.9.0: Comparison Dispersion Statistics - s2.4 * s1.1

% of Total

		s1.1:What type of property do you occupy				Total
		Flat	Independent Property	Space in Shopping center	Other	dispersion
s2.4: The DPW provides variety and choices of properties	Strongly Disagree	3.5%	7.1%	7.1%	3.5%	21.2%
	Disagree	1.2%	14.1%	2.4%	4.7%	22.4%
	Neutral	5.9%	7.1%	5.9%	3.5%	22.4%
	Agree	5.9%	4.7%	7.1%	2.4%	20.0%
	Strongly Agree	5.9%	4.7%	2.4%	1.2%	14.1%
Total		22.4%	37.6%	24.7%	15.3%	100.0%

4.7.7.4. Comparison of s2.5: The DPW performs the service quality for the first time * s1.1: What type of property do you occupy Cross tabulation.

Table 4.9.1: Comparison Dispersion Statistics - s2.5 * s1.1

% of Total

		s1.1:What type of property do you occupy				Total
		Flat	Independent Property	Space in Shopping center	Other	dispersion
s2.5: The DPW performs the service quality for the first time	Strongly Disagree	5.9%	2.4%	5.9%	4.7%	18.8%
	Disagree	2.4%	12.9%	5.9%		21.2%
	Neutral	7.1%	9.4%	7.1%	3.5%	27.1%
	Agree	4.7%	8.2%	2.4%	4.7%	20.0%
	Strongly Agree	2.4%	5.9%	2.4%	2.4%	12.9%
Total		22.4%	38.8%	23.5%	15.3%	100.0%

4.7.7.5. Comparison of s2.6: The DPW provides property services consistently * s1.1: What type of property do you occupy Cross tabulation.

Table 4.9.2: Comparison Dispersion Statistics - s2.6 * s1.1

% of Total

		s1.1:What type of property do you occupy				Total
		Flat	Independent Property	Space in Shopping center	Other	dispersion
s2.6: The DPW provides property services consistently	Strongly Disagree	7.1%	4.7%	4.7%	3.5%	20.0%
	Disagree	1.2%	7.1%	3.5%		11.8%
	Neutral	5.9%	10.6%	3.5%	4.7%	24.7%
	Agree	5.9%	9.4%	5.9%	4.7%	25.9%
	Strongly Agree	2.4%	5.9%	7.1%	2.4%	17.6%
Total		22.4%	37.6%	24.7%	15.3%	100.0%

4.7.7.6. Comparison of s2.7: The DPW provides remedial procedures for emergency repairs * s1.1: What type of property do you occupy Cross tabulation.

Table 4.9.3: Comparison Dispersion Statistics - s2.7 * s1.1

% of Total

		s1.1:What type of property do you occupy				Total
		Flat	Independent Property	Space in Shopping center	Other	dispersion
s2.7: The DPW provides remedial procedures for emergency repairs	Strongly Disagree	4.7%	5.8%	2.3%	2.3%	15.1%
	Disagree	2.3%	9.3%	8.1%	3.5%	23.3%
	Neutral	5.8%	9.3%	8.1%	1.2%	24.4%
	Agree	4.7%	8.1%	2.3%	5.8%	20.9%
	Strongly Agree	4.7%	5.8%	3.5%	2.3%	16.3%
Total		22.1%	38.4%	24.4%	15.1%	100.0%

4.7.7.7. Comparison of s2.8: The DPW provides reliable maintenance * s1.1: What type of property do you occupy Cross tabulation.

Table 4.9.4: Comparison Dispersion Statistics - s2.8 * s1.1

% of Total

		s1.1:What type of property do you occupy				Total
		Flat	Independent Property	Space in Shopping center	Other	dispersion
s2.8: The DPW provides reliable maintenance	Strongly Disagree	4.7%	4.7%	5.8%		15.1%
	Disagree	1.2%	10.5%	5.8%	2.3%	19.8%
	Neutral	8.1%	11.6%	3.5%	2.3%	25.6%
	Agree	4.7%	8.1%	7.0%	4.7%	24.4%
	Strongly Agree	3.5%	3.5%	2.3%	5.8%	15.1%
Total		22.1%	38.4%	24.4%	15.1%	100.0%

4.7.7.8. Comparison of s2.9: The DPW employees provide prompt respond to your request or complaint * s1.1: What type of property do you occupy Cross tabulation.

Table 4.9.5: Comparison Dispersion Statistics - s2.9 * s1.1

of Total

		s1.1:What type of property do you occupy				Total
		Flat	Independent Property	Space in Shopping center	Other	dispersion
s2.9: The DPW employees provides prompt respond to your request or complaint	Strongly Disagree	2.4%	3.5%	3.5%	2.4%	11.8%
	Disagree	5.9%	9.4%	3.5%	2.4%	21.2%
	Neutral	9.4%	11.8%	9.4%	5.9%	36.5%
	Agree	2.4%	8.2%	5.9%	2.4%	18.8%
	Strongly Agree	2.4%	4.7%	2.4%	2.4%	11.8%
Total		22.4%	37.6%	24.7%	15.3%	100.0%

4.7.7.9. Comparison of s2.10: The DPW provides prompt attention to your specific needs * s1.1: What type of property do you occupy Cross tabulation.

Table 4.9.6: Comparison Dispersion Statistics - s2.10 * s1.1

% of Total

		s1.1:What type of property do you occupy				Total
		Flat	Independent Property	Space in Shopping center	Other	dispersion
s2.10: The DPW provides prompt attention to your specific needs	Strongly Disagree	3.5%	7.0%	4.7%	2.3%	17.4%
	Disagree	4.7%	7.0%	4.7%	3.5%	19.8%
	Neutral	3.5%	17.4%	4.7%	7.0%	32.6%
	Agree	5.8%	5.8%	8.1%	1.2%	20.9%
	Strongly Agree	4.7%	1.2%	2.3%	1.2%	9.3%
Total		22.1%	38.4%	24.4%	15.1%	100.0%

4.7.8. Comparison of s2.11: The DPW understands your specific needs * s1.1: What type of property do you occupy Cross tabulation.

Table 4.9.7: Comparison Dispersion Statistics - s2.11 * s1.1

% of Total

		s1.1:What type of property do you occupy				Total
		Flat	Independent Property	Space in Shopping center	Other	dispersion
s2.11: The DPW understands your specific needs	Strongly Disagree	2.3%	1.2%	3.5%	3.5%	10.5%
	Disagree	5.8%	8.1%	2.3%	2.3%	18.6%
	Neutral	5.8%	15.1%	9.3%	4.7%	34.9%
	Agree	3.5%	10.5%	4.7%	3.5%	22.1%
	Strongly Agree	4.7%	3.5%	4.7%	1.2%	14.0%
Total		22.1%	38.4%	24.4%	15.1%	100.0%

4.7.8.1 Comparison of s2.12: The DPW keeps you informed about when services will be performed * s1.1: What type of property do you occupy Cross tabulation.

Table 4.9.8: Comparison Dispersion Statistics - s2.12 * s1.1

% of Total

		s1.1:What type of property do you occupy				Total
		Flat	Independent Property	Space in Shopping center	Other	dispersion
s2.12: The DPW keeps you informed about when services will be performed	Strongly Disagree	5.8%	4.7%	7.0%	4.7%	22.1%
	Disagree	3.5%	11.6%	1.2%	1.2%	17.4%
	Neutral	5.8%	11.6%	4.7%	3.5%	25.6%
	Agree	4.7%	7.0%	7.0%	4.7%	23.3%
	Strongly Agree	2.3%	3.5%	4.7%	1.2%	11.6%
Total		22.1%	38.4%	24.4%	15.1%	100.0%

4.7.8.2. Comparison of s2.13: The DPW provides sincerity & patience in resolving your problems * s1.1: What type of property do you occupy Cross tabulation.

Table 4.9.9: Comparison Dispersion Statistics - s2.13 * s1.1

% of Total

		s1.1:What type of property do you occupy				Total
		Flat	Independent Property	Space in Shopping center	Other	dispersion
s2.13: The DPW provides sincerity & patience in resolving your problems	Strongly Disagree	8.1%	7.0%	1.2%	1.2%	17.4%
	Disagree	2.3%	7.0%	4.7%	1.2%	15.1%
	Neutral	7.0%	11.6%	11.6%	7.0%	37.2%
	Agree	3.5%	10.5%	4.7%	3.5%	22.1%
	Strongly Agree	1.2%	2.3%	2.3%	2.3%	8.1%
Total		22.1%	38.4%	24.4%	15.1%	100.0%

4.7.8.3. Comparison of s2.14: The DPW provides safety performance of the property * s1.1: What type of property do you occupy Cross tabulation.

Table 4.9.10: Comparison Dispersion Statistics - s2.14 * s1.1

% of Total

		s1.1:What type of property do you occupy				Total
		Flat	Independent Property	Space in Shopping center	Other	dispersion
s2.14: The DPW provides safety performance of the property	Strongly Disagree	1.2%	8.1%	3.5%	1.2%	14.0%
	Disagree	5.8%	7.0%	5.8%	2.3%	20.9%
	Neutral	4.7%	15.1%	9.3%	5.8%	34.9%
	Agree	7.0%	4.7%	3.5%	4.7%	19.8%
	Strongly Agree	3.5%	3.5%	2.3%	1.2%	10.5%
Total		22.1%	38.4%	24.4%	15.1%	100.0%

4.7.8.4. Comparison of s2.15: The DPW employees are knowledgeable to answer customer questions * s1.1: What type of property do you occupy Cross tabulation.

Table 4.9.11: Comparison Dispersion Statistics - s2.15 * s1.1

% of Total

		s1.1:What type of property do you occupy				Total
		Flat	Independent Property	Space in Shopping center	Other	dispersion
s2.15: The DPW employees are knowledgeable to answer customer questions	Strongly Disagree	2.3%	5.8%	4.7%	2.3%	15.1%
	Disagree	4.7%	7.0%	1.2%	2.3%	15.1%
	Neutral	8.1%	9.3%	4.7%	7.0%	29.1%
	Agree	4.7%	14.0%	11.6%	3.5%	33.7%
	Strongly Agree	2.3%	2.3%	2.3%		7.0%
Total		22.1%	38.4%	24.4%	15.1%	100.0%

4.7.8.5. Comparison of s2.16: The DPW employees are consistently courteous * s1.1: What type of property do you occupy Cross tabulation.

Table 4.9.12: Comparison Dispersion Statistics - s2.16 * s1.1

% of Total

		s1.1:What type of property do you occupy				Total
		Flat	Independent Property	Space in Shopping center	Other	Flat
s2.16: The DPW employees are consistently courteous	Strongly Disagree	2.3%	2.3%	4.7%		9.3%
	Disagree	4.7%	7.0%	1.2%	4.7%	17.4%
	Neutral	4.7%	14.0%	10.5%	4.7%	33.7%
	Agree	7.0%	11.6%	3.5%	4.7%	26.7%
	Strongly Agree	3.5%	3.5%	4.7%	1.2%	12.8%
Total		22.1%	38.4%	24.4%	15.1%	100.0%

4.7.8.6. Comparison of s2.17: The DPW provides convenient maintenance schedule * s1.1: What type of property do you occupy Cross tabulation.

Table 4.9.13: Comparison Dispersion Statistics - s2.17 * s1.1

% of Total

		s1.1:What type of property do you occupy				Total
		Flat	Independent Property	Space in Shopping center	Other	dispersion
s2.17: The DPW provides convenient maintenance schedule	Strongly Disagree	1.2%	4.7%	3.5%	7.0%	16.3%
	Disagree	4.7%	9.3%	5.8%		19.8%
	Neutral	10.5%	12.8%	4.7%	4.7%	32.6%
	Agree	4.7%	5.8%	8.1%	1.2%	19.8%
	Strongly Agree	1.2%	5.8%	2.3%	2.3%	11.6%
Total		22.1%	38.4%	24.4%	15.1%	100.0%

4.7.8.7. Comparison of s2.18: The DPW provides frequent maintenance service by artisans * s1.1: What type of property do you occupy Cross tabulation.

Table 4.9.14: Comparison Dispersion Statistics - s2.18 * s1.1

% of Total

		s1.1:What type of property do you occupy				Total
		Flat	Independent Property	Space in Shopping center	Other	Flat
s2.18: The DPW provides frequent maintenance service by artisans	Strongly Disagree	3.5%	4.7%	3.5%	1.2%	12.8%
	Disagree	4.7%	10.5%	3.5%	4.7%	23.3%
	Neutral	3.5%	9.3%	5.8%	2.3%	20.9%
	Agree	3.5%	9.3%	5.8%	4.7%	23.3%
	Strongly Agree	7.0%	4.7%	5.8%	2.3%	19.8%
Total		22.1%	38.4%	24.4%	15.1%	100.0%

4.7.8.8. Comparison of s2.19: The DPW has spontaneous care & concern for your needs * s1.1: What type of property do you occupy Cross tabulation.

Table 4.9.15: Comparison Dispersion Statistics - s2.19 * s1.1

% of Total

		s1.1:What type of property do you occupy				Total
		Flat	Independent Property	Space in Shopping center	Other	dispersion
s2.19: The DPW has spontaneous care & concern for your needs	Strongly Disagree	4.7%	7.0%	3.5%	2.3%	17.4%
	Disagree	7.0%	9.3%	11.6%	5.8%	33.7%
	Neutral	5.8%	18.6%	1.2%	4.7%	30.2%
	Agree	3.5%	1.2%	3.5%	1.2%	9.3%
	Strongly Agree	1.2%	2.3%	4.7%	1.2%	9.3%
Total		22.1%	38.4%	24.4%	15.1%	100.0%

4.7.8.9. Comparison of s2.20: The DPW has a sound loyalty programme to recognize you as a frequent customer * s1.1: What type of property do you occupy Cross tabulation.

Table 4.9.16: Comparison Dispersion Statistics - s2.20 * s1.1

% of Total

		s1.1:What type of property do you occupy				Total
		Flat	Independent Property	Space in Shopping center	Other	dispersion
s2.20: The DPW has a sound loyalty programme to recognize you as a frequent customer	Strongly Disagree	1.2%	3.5%	1.2%	1.2%	7.0%
	Disagree	3.5%	7.0%	1.2%	1.2%	12.8%
	Neutral	2.3%	11.6%	4.7%	4.7%	23.3%
	Agree	10.5%	9.3%	14.0%	3.5%	37.2%
	Strongly Agree	4.7%	7.0%	3.5%	4.7%	19.8%
Total		22.1%	38.4%	24.4%	15.1%	100.0%

4.8.0 Comparison of Dispersion Statistics - Marital Status

4.8.1. Comparison of s2.1: The DPW Provides world class properties * b3: Your marital status Cross tabulation.

Table 4.9.17: Comparison Dispersion Statistics - s2.1 * b3

% of Total

		b3: Your marital status					Total
		Married	Single	Divorced	Widow	Living together	dispersion
s2.1:The DPW Provides world class properties	Strongly Disagree	4.8%	8.3%	4.8%			17.9%
	Disagree	2.4%	15.5%	3.6%			21.4%
	Neutral	10.7%	15.5%	1.2%	1.2%	1.2%	29.8%
	Agree	3.6%	1.2%	3.6%	1.2%		9.5%
	Strongly Agree	4.8%	8.3%	8.3%			21.4%
Total		26.2%	48.8%	21.4%	2.4%	1.2%	100.0%

The above table results reveal comparison dispersion results of respondents' perceptions as per marital status groups, table 106 results clearly exhibit dispersion of different group's respondents.

4.8.1 Comparison of s2.2: The DPW has modern and clean properties * b3: Your marital status Cross tabulation.

Table 4.9.18: Comparison Dispersion Statistics - s2.2 * b3

% of Total

		b3: Your marital status					Total
		Married	Single	Divorced	Widow	Living together	dispersion
s2.2: The DPW has modern and clean properties	Strongly Disagree	7.1%	3.6%	1.2%			11.9%
	Disagree	7.1%	19.0%	2.4%	1.2%		29.8%
	Neutral	7.1%	15.5%	15.5%			38.1%
	Agree	2.4%	2.4%	2.4%	1.2%	1.2%	9.5%
	Strongly Agree	2.4%	8.3%				10.7%
Total		26.2%	48.8%	21.4%	2.4%	1.2%	100.0%

4.8.1.1 Comparison of s2.3: The DPW provides variety and quality equipments * b3: Your marital status Cross tabulation.

Table 4.9.19: Comparison Dispersion Statistics - s2.3 * b3

% of Total

		b3: Your marital status					Total
		Married	Single	Divorced	Widow	Living together	dispersion
s2.3: The DPW provides variety and quality equipments	Strongly Disagree	1.2%	4.8%	6.0%		1.2%	13.3%
	Disagree	3.6%	12.0%	4.8%			20.5%
	Neutral	8.4%	16.9%	1.2%	1.2%		27.7%
	Agree	13.3%	8.4%	8.4%	1.2%		31.3%
	Strongly Agree		6.0%	1.2%			7.2%
Total		26.5%	48.2%	21.7%	2.4%	1.2%	100.0%

4.8.1.2 Comparison of s2.4: The DPW provides variety and choices of properties * b3: Your marital status Cross tabulation.

Table 4.9.20: Comparison Dispersion Statistics - s2.4 * b3

% of Total

		b3: Your marital status					Total
		Married	Single	Divorced	Widow	Living together	dispersion
s2.4: The DPW provides variety and choices of properties	Strongly Disagree	6.0%	9.6%	3.6%	1.2%	1.2%	21.7%
	Disagree	7.2%	10.8%	2.4%			20.5%
	Neutral	6.0%	13.3%	3.6%			22.9%
	Agree	4.8%	7.2%	8.4%			20.5%
	Strongly Agree	2.4%	8.4%	2.4%	1.2%		14.5%
Total		26.5%	49.4%	20.5%	2.4%	1.2%	100.0%

4.8.1.3 Comparison of s2.5: The DPW performs the service quality for the first time * b3: Your marital status Cross tabulation.

Table 4.9.21: Comparison Dispersion Statistics - s2.5 * b3

% of Total

	b3: Your marital status					Total
	Married	Single	Divorced	Widow	Living together	Married
s2.5: The DPW performs the service quality for the first time	3.6%	8.4%	4.8%			16.9%
Strongly Disagree	4.8%	12.0%	4.8%		1.2%	22.9%
Neutral	9.6%	14.5%	3.6%			27.7%
Agree	3.6%	9.6%	3.6%	2.4%		19.3%
Strongly Agree	4.8%	3.6%	4.8%			13.3%
Total	26.5%	48.2%	21.7%	2.4%	1.2%	100.0%

4.8.1.4 Comparison of s2.6: The DPW provides property services consistently * b3: Your marital status Cross tabulation.

Table 4.9.22: Comparison Dispersion Statistics - s2.6 * b3

% of Total

	b3: Your marital status					Total
	Married	Single	Divorced	Widow	Living together	Married
s2.6: The DPW provides property services consistently	6.0%	12.0%	2.4%			20.5%
Strongly Disagree	3.6%	9.6%				13.3%
Neutral	3.6%	8.4%	8.4%	2.4%		22.9%
Agree	7.2%	12.0%	4.8%		1.2%	25.3%
Strongly Agree	6.0%	7.2%	4.8%			18.1%
Total	26.5%	49.4%	20.5%	2.4%	1.2%	100.0%

4.8.1.5 Comparison of s2.7: The DPW provides remedial procedures for emergency repairs * b3: Your marital status Cross tabulation.

Table 4.9.23: Comparison Dispersion Statistics - s2.7 * b3

% of Total

		b3: Your marital status					Total
		Married	Single	Divorced	Widow	Living together	Married
s2.7: The DPW provides remedial procedures for emergency repairs	Strongly Disagree	2.4%	3.6%	6.0%	1.2%	1.2%	14.3%
	Disagree	3.6%	13.1%	6.0%			22.6%
	Neutral	10.7%	13.1%	2.4%			26.2%
	Agree	4.8%	14.3%	2.4%			21.4%
	Strongly Agree	4.8%	4.8%	4.8%	1.2%		15.5%
Total		26.2%	48.8%	21.4%	2.4%	1.2%	100.0%

4.8.1.6 Comparison of s2.8: The DPW provides reliable maintenance * b3: Your marital status Cross tabulation.

Table 4.9.24: Comparison Dispersion Statistics - s2.8 * b3

% of Total

		b3: Your marital status					Total
		Married	Single	Divorced	Widow	Living together	Married
s2.8: The DPW provides reliable maintenance	Strongly Disagree	4.8%	3.6%	4.8%	1.2%	1.2%	15.5%
	Disagree	4.8%	14.3%	2.4%			21.4%
	Neutral	6.0%	11.9%	7.1%			25.0%
	Agree	6.0%	10.7%	6.0%	1.2%		23.8%
	Strongly Agree	4.8%	8.3%	1.2%			14.3%
Total		26.2%	48.8%	21.4%	2.4%	1.2%	100.0%

4.8.1.7 Comparison of s2.9: The DPW employees provides prompt respond to your request or complaint * b3: Your marital status Cross tabulation.

Table 4.9.25: Comparison Dispersion Statistics - s2.9 * b3

% of Total

		b3: Your marital status					Total
		Married	Single	Divorced	Widow	Living together	Married
s2.9: The DPW employees provides prompt respond to your request or complaint	Strongly Disagree	1.2%	6.0%	3.6%			10.8%
	Disagree	7.2%	10.8%	2.4%	1.2%		21.7%
	Neutral	10.8%	16.9%	7.2%	1.2%	1.2%	37.3%
	Agree	4.8%	8.4%	6.0%			19.3%
	Strongly Agree	1.2%	7.2%	2.4%			10.8%
Total		25.3%	49.4%	21.7%	2.4%	1.2%	100.0%

4.8.1.8 Comparison of s2.10: The DPW provides prompt attention to your specific needs * b3: Your marital status Cross tabulation.

Table 4.9.26: Comparison Dispersion Statistics - s2.10 * b3

% of Total

		b3: Your marital status					Total
		Married	Single	Divorced	Widow	Living together	Married
s2.10: The DPW provides prompt attention to your specific needs	Strongly Disagree	6.0%	8.3%	3.6%			17.9%
	Disagree	3.6%	8.3%	6.0%	1.2%	1.2%	20.2%
	Neutral	8.3%	19.0%	6.0%			33.3%
	Agree	6.0%	8.3%	4.8%	1.2%		20.2%
	Strongly Agree	2.4%	4.8%	1.2%			8.3%
Total		26.2%	48.8%	21.4%	2.4%	1.2%	100.0%

4.8.1.9. Comparison of s2.11: The DPW understands your specific needs * b3: Your marital status Cross tabulation.

Table 4.9.27: Comparison Dispersion Statistics - s2.11 * b3

% of Total

		b3: Your marital status					Total
		Married	Single	Divorced	Widow	Living together	Married
s2.11: The DPW understands your specific needs	Strongly Disagree	3.6%	3.6%	2.4%		1.2%	10.7%
	Disagree	3.6%	8.3%	6.0%			17.9%
	Neutral	13.1%	14.3%	6.0%	1.2%		34.5%
	Agree	3.6%	13.1%	6.0%			22.6%
	Strongly Agree	2.4%	9.5%	1.2%	1.2%		14.3%
Total		26.2%	48.8%	21.4%	2.4%	1.2%	100.0%

4.8.2.0 Comparison of s2.12: The DPW keeps you informed about when services will be performed * b3: Your marital status Cross tabulation.

Table 4.9.28: Comparison Dispersion Statistics - s2.12 * b3

% of Total

		b3: Your marital status					Total
		Married	Single	Divorced	Widow	Living together	Married
s2.12: The DPW keeps you informed about when services will be performed	Strongly Disagree	3.6%	11.9%	3.6%		1.2%	20.2%
	Disagree	8.3%	8.3%		1.2%		17.9%
	Neutral	6.0%	14.3%	6.0%	1.2%		27.4%
	Agree	6.0%	7.1%	9.5%			22.6%
	Strongly Agree	2.4%	7.1%	2.4%			11.9%
Total		26.2%	48.8%	21.4%	2.4%	1.2%	100.0%

4.8.2.1. Comparison of s2.13: The DPW provides sincerity & patience in resolving your problems * b3: Your marital status Cross tabulation.

Table 4.9.29: Comparison Dispersion Statistics - s2.13 * b3

% of Total

		b3: Your marital status					Total
		Married	Single	Divorced	Widow	Living together	Married
s2.13: The DPW provides sincerity & patience in resolving your problems	Strongly Disagree	3.6%	7.1%	6.0%	1.2%		17.9%
	Disagree	4.8%	7.1%	2.4%	1.2%	1.2%	16.7%
	Neutral	8.3%	16.7%	10.7%			35.7%
	Agree	9.5%	11.9%				21.4%
	Strongly Agree		6.0%	2.4%			8.3%
Total		26.2%	48.8%	21.4%	2.4%	1.2%	100.0%

4.8.2.2 Comparison of s2.14: The DPW provides safety performance of the property * b3: Your marital status Cross tabulation.

Table 4.9.30: Comparison Dispersion Statistics - s2.14 * b3

% of Total

		b3: Your marital status					Total
		Married	Single	Divorced	Widow	Living together	Married
s2.14: The DPW provides safety performance of the property	Strongly Disagree	1.2%	7.1%	6.0%			14.3%
	Disagree	4.8%	13.1%	3.6%		1.2%	22.6%
	Neutral	14.3%	14.3%	3.6%	2.4%		34.5%
	Agree	2.4%	11.9%	4.8%			19.0%
	Strongly Agree	3.6%	2.4%	3.6%			9.5%
Total		26.2%	48.8%	21.4%	2.4%	1.2%	100.0%

4.8.2.3 Comparison of s2.15: The DPW employees are knowledgeable to answer customer questions * b3: Your marital status Cross tabulation.

Table 4.9.31: Comparison Dispersion Statistics - s2.15 * b3

% of Total

		b3: Your marital status					Total
		Married	Single	Divorced	Widow	Living together	Married
s2.15: The DPW employees are knowledgeable to answer customer questions	Strongly Disagree	4.8%	8.3%	2.4%			15.5%
	Disagree	4.8%	8.3%	2.4%			15.5%
	Neutral	4.8%	14.3%	8.3%			27.4%
	Agree	8.3%	15.5%	7.1%	2.4%	1.2%	34.5%
	Strongly Agree	3.6%	2.4%	1.2%			7.1%
Total		26.2%	48.8%	21.4%	2.4%	1.2%	100.0%

4.8.2.4 Comparison of s2.16: The DPW employees are consistently courteous * b3: Your marital status Cross tabulation.

Table 4.9.32: Comparison Dispersion Statistics - s2.16 * b3

% of Total

		b3: Your marital status					Total
		Married	Single	Divorced	Widow	Living together	Married
s2.16: The DPW employees are consistently courteous	Strongly Disagree	1.2%	4.8%	3.6%			9.5%
	Disagree	4.8%	8.3%	4.8%			17.9%
	Neutral	11.9%	16.7%	3.6%	2.4%		34.5%
	Agree	6.0%	11.9%	6.0%		1.2%	25.0%
	Strongly Agree	2.4%	7.1%	3.6%			13.1%
Total		26.2%	48.8%	21.4%	2.4%	1.2%	100.0%

4.8.2.5 Comparison of s2.17: The DPW provides convenient maintenance schedule * b3: Your marital status Cross tabulation.

Table 4.9.33: Comparison Dispersion Statistics - s2.17 * b3

% of Total

		b3: Your marital status					Total
		Married	Single	Divorced	Widow	Living together	Married
s2.17: The DPW provides convenient maintenance schedule	Strongly Disagree	3.6%	9.5%	1.2%			14.3%
	Disagree	8.3%	8.3%	2.4%	1.2%	1.2%	21.4%
	Neutral	6.0%	16.7%	10.7%			33.3%
	Agree	3.6%	9.5%	6.0%	1.2%		20.2%
	Strongly Agree	4.8%	4.8%	1.2%			10.7%
Total		26.2%	48.8%	21.4%	2.4%	1.2%	100.0%

4.8.2.6 Comparison of s2.18: The DPW provides frequent maintenance service by artisans * b3: Your marital status Cross tabulation.

Table 4.9.34: Comparison Dispersion Statistics - s2.18 * b3

% of Total

		b3: Your marital status					Total
		Married	Single	Divorced	Widow	Living together	Married
s2.18: The DPW provides frequent maintenance service by artisans	Strongly Disagree	1.2%	6.0%	2.4%	1.2%	1.2%	11.9%
	Disagree	8.3%	10.7%	6.0%			25.0%
	Neutral	4.8%	13.1%	2.4%			20.2%
	Agree	7.1%	11.9%	3.6%	1.2%		23.8%
	Strongly Agree	4.8%	7.1%	7.1%			19.0%
Total		26.2%	48.8%	21.4%	2.4%	1.2%	100.0%

4.8.2.7 Comparison of s2.19: The DPW has spontaneous care & concern for your needs * b3: Your marital status Cross tabulation.

Table 4.9.35: Comparison Dispersion Statistics - s2.19 * b3

% of Total

		b3: Your marital status					Total
		Married	Single	Divorced	Widow	Living together	Married
s2.19: The DPW has spontaneous care & concern for your needs	Strongly Disagree	6.0%	6.0%	6.0%			17.9%
	Disagree	8.3%	16.7%	4.8%	2.4%	1.2%	33.3%
	Neutral	8.3%	17.9%	3.6%			29.8%
	Agree	2.4%	3.6%	3.6%			9.5%
	Strongly Agree	1.2%	4.8%	3.6%			9.5%
Total		26.2%	48.8%	21.4%	2.4%	1.2%	100.0%

4.8.2.8 Comparison of s2.20: The DPW has a sound loyalty programme to recognize you as a frequent customer * b3: Your marital status Cross tabulation.

Table 4.9.36: Comparison Dispersion Statistics - s2.20 * b3

% of Total

		b3: Your marital status					Total
		Married	Single	Divorced	Widow	Living together	Married
s2.20: The DPW has a sound loyalty programme to recognize you as a frequent customer	Strongly Disagree	1.2%	2.4%	3.6%			7.1%
	Disagree	2.4%	7.1%	3.6%			13.1%
	Neutral	8.3%	10.7%	6.0%			25.0%
	Agree	7.1%	19.0%	7.1%	2.4%	1.2%	36.9%
	Strongly Agree	7.1%	9.5%	1.2%			17.9%

4.9 Conclusion

This chapter outlined the instrument employed, detailed analysis of the results obtained from the questionnaire survey of both tenants and DPW officials. Both tenants and DPW officials filled up the questionnaires to evaluate the tenants'

perception about the treatment they received from the DPW officials. Chapter 5 discusses the results obtained from the respondents with regard to their perceptions on the service quality they receive from DPW.