



**THE IMPACT OF WORK DESIGN ON JOB SATISFACTION – A CASE STUDY OF THE  
ELECTRICITY STORES DEPARTMENT, ETHEKWINI MUNICIPALITY**

Submitted in fulfilment of the requirements for the degree of Masters of Management Sciences:  
Business Administration in the Faculty of Management Sciences at the Durban University of Technology

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## **ABSTRACT**

This study sought to examine the relationship between work design factors and job satisfaction with the eThekweni Electricity stores as the case study. The primary objective of the study was the assessment of the impact of work design factors on job satisfaction. Job satisfaction plays a crucial role in employee motivation and productivity that generally contributes to the attainment of organisational goals. Studies globally suggest that practicable work designs are associated with the enhancement of employee morale and motivation, hence increasing job satisfaction. In South Africa municipalities have come under scrutiny for buildings and offices that are derelict in appearance. Moreover, due to the deficiency of capital resources by local government, the maintenance and refurbishing of buildings, equipment and machinery are generally being neglected. Acceptable work designs are dependent on meticulous building infrastructure and appropriate machinery and equipment; hence, this study is devoted to the eThekweni Electricity stores' environment in Durban.

eThekweni Electricity has twelve (12) stores located within the Metropolitan region that holds and supplies stock for maintenance and construction purposes. The study findings are based on a sample of 65 respondents with a response rate of 92.30% for the self-administered questionnaires. As part of a mixed methods research approach, five (5) participants were also interviewed. The study's theoretical framework is undergirded by the Work Design Questionnaire of Morgeson and Humphrey (2006) and the motivation theory by Herzberg that uses motivators as factors that seek to enhance job satisfaction, while the job characteristics model by Hackman and Oldham employs skill, variety, task variety, task significance, autonomy and feedback as factors to be incorporated into work design to enhance employee morale. The results from this study suggest work design factors such as autonomy and task variety are perceived by employees as significant contributors to job satisfaction, while work design factors job complexity, information processing and problem-solving point to an appreciable proportion of contribution toward job satisfaction, but equally does not contribute to job dissatisfaction. This study also revealed a pronounced dissatisfaction with work design factors such as ergonomics, physical demands and work conditions.

The findings in this study point to arenas within eThekweni Electricity stores that can be improved upon in respect of work design. The appropriate managerial interventions ought to address the perceived deficiencies. Review of existing work methods together with appropriate training and development can be employed to address work factors such as job complexity, information processing and problem solving, while the use of appropriate technology and mechanisation ought to be used for work design factors such as ergonomics, physical demands and work conditions. Additionally, it is proposed that improved health and safety standards together with 'green environment' initiatives be encouraged to enhance job satisfaction outcomes with employees. The study used the Work Design Questionnaire and adapted it uniquely to suit the eThekweni Electricity Municipality stores' environment. The approach and methodology utilised in this study could certainly be adopted in any warehousing environment, especially in a local government setting.



## DECLARATION

I, the undersigned, hereby declare that the content in this thesis is my own work, except where indicated, with references authentically reported to the best of my knowledge. I certify further that the thesis/dissertation has not been submitted for a degree at any other educational institution.

***D. Maniram***

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DHANESH MANIRAM

## **DEDICATION**

This work is dedicated to my Higher Power who is the God of my understanding, without who's influence and inspiration, I may not have completed this work.

To my children Sachin, Sherav and Shreia together with my wife Rekha for their unwavering support, and the sacrifices that they had to endure during my studies.

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My sincere thanks to all other stakeholders, line management and colleagues at eThekweni Electricity (my employer) for the consent to conduct my study, and for all the assistance they so readily provided. It has been a pleasure being part of the team.

## **LIST OF ACRONYMS**

COVID-19	Coronavirus Disease of 2019
ERP	Enterprise Resource Planning
IOD	Injury on Duty
JC	Job Complexity
JCM	Job Characteristics Model
JDE	Jack Dan Edwards
JDS	Job Diagnostic Survey
KC	Knowledge Characteristics
KMO	Kaiser-Meyer-Olkin Measure of Sampling Adequacy
KZN	KwaZulu-Natal
LED	Light Emitting Diode
MJDQ	Multi-method Job Design Questionnaire
OHS	Occupational Health and Safety
SA	South Africa
SC	Social Characteristics
SI	Social Interaction
SPSS	Statistical Package for the Social Sciences
STS	Sociotechnical Systems
SWL	Safe Working Load
TC	Task Characteristics
WC	Work Context
WDQ	Work Design Questionnaire

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# **CHAPTER ONE: INTRODUCTION TO THE STUDY**

## **1.1 INTRODUCTION**

The impact of job satisfaction in the workplace is crucial in determining organisational success. Job satisfaction, in turn, is affected by employee motivation levels and work design as revealed in a study by Liu, Li-Ping Tang and Yang (2015), who posit that improved job satisfaction is attained through motivation, person-organisation fit and needs-supplies fit. Work design is primarily concerned with the approach in which jobs and tasks are arranged and organised and the impact it has on workers and is also used to assess the best match for attributes of staff to their tasks in a working environment. Work design plays an integral part in organisations and if used effectively, could stimulate employee interest to work and increase their job satisfaction. Ineffective work design techniques could be related to work-related injuries such as musculoskeletal disorders and boredom, (Comper, Dennerlein, dos Santos Evangelista, da Silva, and Padula, 2017). There are various work design theories and techniques such as job rotation, job enlargement and job enrichment that seek to improve employee motivation and ultimately job satisfaction. The motivation theory by Herzberg (1959), uses motivators as factors that are related to employee satisfaction, while hygiene factors are linked to employee dissatisfaction (Malik and Naeem 2013). Another motivation theory by Hackman and Oldham (1970), advances the job characteristics model (JCM) that employs skill variety, task variety, task significance, autonomy and feedback as factors that could be integrated into work design to enhance employee morale (Casey and Robbins 2010). While Eric Trist (1951) utilised social and technical aspects of work design in his sociotechnical systems theory (STS) to elevate job satisfaction and productivity, (Wilson, Tucker, Hannibal and Qu 2021). A well-designed job according to Zareen, Razzaq and Mujtaba (2013), involves an acceptable psychological perception and positive viewpoint from workers that motivates them to become highly productive and faithful to the organisation.

The purpose of this study is to assess the impact and influence of work design factors on job satisfaction of the employees in the eThekweni Electricity stores' department. Often there are complaints by employees regarding deteriorating physical work environment conditions within an organisation and in this particular study, similar

sentiments have been expressed by the employees in the store's department. It holds and supplies stock that is critical for the efficient functioning of the electricity department in the eThekweni region. Given the importance of the electricity stores department, the physical and psychological conditions of workers are essential to perform optimally. Employees have been complaining of fatigue and excessive dust and heat in their workplace environments. Additionally, employees have pointed to strenuous tasks that required extreme bending and the use of muscular strength to accomplish. Studies have revealed that such adverse working conditions may lead to injury, burnout and job dissatisfaction.

This study seeks to examine employees' perceptions on the impact of work design factors on job satisfaction from both psychological and physiological perspectives. The psychological elements of work design include autonomy, task variety, task identity, feedback from the job, skill variety, social support and interaction outside the organisation, while the physiological elements consist of ergonomics, physical demands, work conditions and equipment use. The key research objective is to identify the factors of work design and job satisfaction and explore the relationship between them. Secondary objectives are to examine current processes and methods with a view to recommending better work design interventions, if necessary. The study will use the mixed-method research design. The work design dimensions were selected using the Work Design Questionnaire (WDQ), produced by Morgeson and Humphrey (2006), which has been adapted for this study. The study seeks to improve practices and inspire policy, especially in a warehousing environment where health and safety are of paramount importance.

## **1.2 OVERVIEW/BACKGROUND OF STUDY**

Numerous studies in social and environmental psychology and organisational ecology demonstrate that office characteristics, such as indoor environment and space organisation influences the perceptions and attitude of employees (Kim and Young 2014). Additionally, work design has affected psychological outcomes such as intrinsic work motivation, stress, burn out and job satisfaction, (Tarcn, Hikmet, Schooley, Top and Tarcn, 2017).

Anastasiou and Garametsi (2021), observed that a low rate of job satisfaction can be attributed to the deteriorating environmental conditions of an organisation. Knight and Parker (2019) describe work design as the manner in which jobs, tasks, and roles are arranged, accepted, and modified as well as the impact of these arrangements, approvals, and modifications on individual, group, and organisational outcomes. Consequently, a safe and healthy working environment, with improved work designs, could yield an increase in job satisfaction, productivity and outputs. One could surmise that if workers have a perception that their organisations are supportive, and are satisfied with the organisational structures, they are more likely to recognise that organisations are valuing their safety and well-being.

This study is intended to contribute to extant research and add to available empirical work on the impact of work design on job satisfaction more specifically in the stores department of any organisation. This topic aims to improve work design and contribute to current company health and safety practices, and ultimately job satisfaction. The study is ultimately expected to assist management at eThekweni Electricity stores departments to regulate and enhance current policies and procedures given the importance of the electricity department to service delivery in the eThekweni Metropolitan Municipality. This would help address the ergonomic risk factors and create a healthier and safer working environment.

### **1.3 RESEARCH PROBLEMS AND AIMS**

Ikonne and Yacob (2014) in a study, argue that the low rate or lack of job satisfaction has been attributed to, amongst other things, deterioration in the working environment of an organisation that could lead to increased labour turnover. This study seeks to address the problem of how work design may impact job satisfaction at eThekweni Electricity stores. A study conducted by Dawal, Ismail and Taha (2011) examined human factors, the ergonomics model and application in Automotive Industries: Focus on Job Satisfaction. The study found that job satisfaction could be affected by work design through factors such as job environment, job characteristics and job organisation. The relationships between these factors and job satisfaction were analysed using correlations to derive new insights into factors affecting job satisfaction in automotive industries. A measuring tool called the job diagnostic survey by Hackman and Oldham (1976) was used to diagnose these factors. However, the JDS

was found to be deficient, as it failed to focus more extensively on work characteristics. The deficiency was addressed when Morgeson and Humphrey (2006) designed the Work Design Questionnaire (WDQ, which has been adapted for the purposes of this study.

Furthermore, due to the relatively sparse integrated empirical studies conducted in work design and job satisfaction at the local government level, this study seeks to where possible, address gaps in knowledge within this field of study. The eThekwini Electricity stores have been selected for this study as numerous complaints from employees regarding abject working conditions and health concerns were cited. Additionally, the number of injury-on-duty incidents have risen in recent years. This study aims to evaluate the current work design dynamics and introduce a revised work design model if necessary to mitigate the current health and safety challenges and enhance employee motivation and production. Municipalities form a critical part of service delivery for local government. Hence, every service unit/department is required to operate optimally otherwise they can negatively affect service delivery at a local government level. This study focusses on the eThekwini Electricity stores' unit, which is a major contributor to service delivery.

## **1.4 AIM AND OBJECTIVES**

The aim of this study is to examine the relationship between the work design factors at eThekwini Electricity stores, and job satisfaction.

This study is guided by the following key objectives:

- Examination of the theoretical and contextual aspects together with practices of work design factors at eThekwini Electricity stores.
- To analyse work designs and ergonomics factors to develop methods that may simplify and streamline work processes at stores.
- To investigate the relationship between work design factors and job satisfaction and, to determine if there is a better fit that could improve production and employee contentment.
- To examine current processes at stores; and to recommend a model for work designs and ergonomic interventions, which would create a more comfortable and safer working environment.

## **1.5 KEY RESEARCH QUESTIONS**

- What work design factors contribute to positive job satisfaction?
- Which work design factors have very little impact on job satisfaction, not job dissatisfaction?
- Which work design factors are likely to have the propensity to contribute to job satisfaction?

## **1.6 RATIONALE OF THE STUDY**

A study by Bangwal, Tiwari and Chamola (2017) suggest that work design may contribute to the overall morale and motivation of employees, which are key to job satisfaction. Additionally, poor work designs could result in injury and even fatalities. The intention of this study is to identify any weakness or deficiencies in the current work design model at eThekwini Electricity stores and to revise it accordingly, if required, to enhance better job satisfaction. Chihara and Seo (2017), in a study, argued that an optimal work environment design would minimise workload and enhance ergonomic comfort. The eThekwini Municipality deals with several reports of injury and death annually amongst their employees, due to unsafe working conditions and labour practices. eThekwini Electricity stores form a significant part of those statistics hence this study intends to examine the work design dynamics at eThekwini Electricity stores. Tasks at eThekwini Electricity stores are mainly labour intensive and require excessive bending, reaching and carrying of electrical components such as cables, insulators and sacks of bolts/nuts. Stores clerks are required to capture stores documents continually with just the tea breaks and lunch in between to offer some respite. Health and safety reports from committee meetings at eThekwini Electricity stores over the past few years reveal the following injuries:

- Two employees injured their backs and were transferred to jobs that offer light duty.
- An employee broke a finger while closing a metal roller door.
- An employee fractured bones in both his hands while operating machinery.
- Several employees received medical attention at local clinics for bruised and cut appendages arising from the use of cutting equipment.

Studies also reveal that unfavourable working conditions may impact the psychological health of employees as advanced by Catherine M (2018) whose findings suggest that employees with freedom and autonomy to make decisions on process flows will be more committed and dedicated to their work.

The study would therefore examine all work design layouts and processes at eThekweni Electricity stores that are presently being utilised and recommend processes to streamline or reshape the current model if required.

## **1.7 SCOPE OF THE STUDY**

The scope of this study would be confined to twelve (12) stores within the eThekweni Electricity region in Durban. The study investigates the impact of work design on job satisfaction at eThekweni Electricity stores, Durban.

## **1.8 DELIMITATIONS**

- The study will involve stores' staff employed by eThekweni Municipality (Electricity), within the municipal metropolitan region.
- The study is limited to stores only, within the electricity service unit.
- The study may not represent the ethnic or racial demographics proportionally.
- The study is limited only to local government employees.

## **1.9 LIMITATIONS**

- Hence results or findings may not be conclusive given that it is confined to one department within a very large organisation.
- The subjects may not respond honestly, due to pressures of conformity.
- Other work design, factors, besides task characteristics, knowledge characteristics, social characteristics and work content, will not be explored, while job satisfaction factors, such as pay, promotion and individual characteristics, will not be explored extensively, as more emphasis will be placed on working conditions.



## **1.10 LIMITATIONS OF THE WDQ**

As much as the WDQ has proven reliability and validity and is regarded as the most conceptually consistent and methodologically suited human resources management work design theory by Moussa, Bright and Varua (2017), the WDQ is not without limitations. Morgeson and Humphrey (2006) highlight a few limitations. Firstly, the data collected from respondents were taken from both the WDQ measures and satisfaction simultaneously, which may have inflated the relationship between them. Secondly, the gathered data was not from a wide variety of different jobs. The sample was predominantly taken from respondents at management level. Finally, there were only direct relationships between the WDQ scales and outcomes, hence the moderating factor was omitted. It is suggested that a more accurate assessment may have been attained if the outcomes were moderated by individual differences.

## **1.11 VALIDITY AND RELIABILITY/TRUSTWORTHINESS**

Creswell (2014) defines validity as using certain procedures to check for the accuracy of findings. Kumar (2018) posits that validity is ensured when the measuring instruments used in the study can measure what is required to be measured. The measuring instrument used in this study has proven validity and reliability (Morgeson and Humphrey (2006). The results of the study must also compare favourably with other similar studies to confirm validity. Baker, According to Goodman, Santo and Wong (2018), reliability is the repeatability and consistency of research procedures that are used in a study. The study will use Cronbach's alpha measure to ensure reliability. Cronbach's alpha will be derived by using the average correlations of factors between the Likert-scale assessments as utilised by in the study of work design and job satisfaction (Dawal, Ismail and Taha 2011; He, Van de Vijver, Fetvadjev, de Carmen Dominguez Espinosa, Adams, Alonso–Arbiol, Aydinli–Karakulak, Buzea, Dimitrova, Fortin and Hapunda, 2017)

A pilot study with fifteen percent of the sample population was used to pre-test the questionnaire. The pilot study will aid in checking if the instructions are understandable and assess the results for validity and reliability.

## **1.12 ANONYMITY AND CONFIDENTIALITY**

Anonymity protects the real identity of the respondents and the study itself. It is important because information of a sensitive nature shared could jeopardise respondents' social standing, benefits and even their jobs. Lahman, Rodriguez, Moses, Griffin, Mendoza and Yacoub (2015) states that participant anonymity or pseudonyms can be used as options. The researcher will omit the names of sites and respondents from all documents used in the study. According to Sim and Waterfield (2019), confidentiality is established by the principle of respect for autonomy and is taken to mean that information divulged by someone during the research process cannot be disclosed without consent. All respondents are to be de-identified, and the information shared by them will not be disclosed in any form together with all the study information and records.

## **1.13 ETHICAL CONSIDERATIONS**

Meetings with the potential participants to inform them of the topic were scheduled to discuss the possible risks and benefits of the study. The study confirms complete anonymity and confidentiality to respondents. Clarification in respect of consent forms regarding anonymity will be discussed, and all respondents will be asked to sign them off. All data and results will be kept confidential, and the respondents' rights to privacy will not be infringed. All data will be stored in a lockable safe.

## 1.14 OUTLINE OF CHAPTERS

<b>Chapter One</b>	This chapter provides a broad overview and discusses the significance of the research study. It forms the introduction to the research that will describe the problem statement, key research questions, aims, contextual and theoretical underpinnings, objectives, limitations/delimitations and reasons for the study.
<b>Chapter Two</b>	This chapter underpins the literature review that expounds on the theoretical background and conceptual framework of the variables in this study, where major findings and conclusions are cited to address methodological issues associated with gaps in knowledge.
<b>Chapter Three</b>	The research methodology chapter will describe the research design, type of sampling and measuring instruments in this study.
<b>Chapter Four</b>	This chapter will entail the analysis, interpretation and presentation of results based on the data collected.
<b>Chapter Five</b>	Chapter Five will provide a summary of the research which also includes conclusions and recommendations based on findings in the preceding chapter.

## 1.15 CONCLUSION

The chapter presented the background and research problems of the study. The aim, objectives and the rationale that substantiates this study were also highlighted. Additionally, the limitations, ethical considerations and sequence of the dissertation chapters were discussed. The next chapter focusses on the literature review, where the discussion of relevant theories and existing literature explains the importance of the impact of work design on job satisfaction.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 INTRODUCTION**

Work design plays a crucial role in terms of the physical and psychological health of workers. Various studies confirm that factors such as poor ventilation, inadequate space and noisy environments tend to adversely affect production (Bangwal, Tiwari and Chamola, 2017). Equally, such factors contribute largely to the job satisfaction of employees. Public management theory, particularly in practice, has focussed on developing strategic management and human capital in organisations but has neglected the physical settings at work. Kim and Young (2014) observed that design decisions in public agencies are mostly governed by political expectations and budget allocations, and little consideration is given to the effects of work design and ambience on employees. In a study by Anya (2015), work design and configurations of work performance are said to be closely woven into the functions and structure of organisations, while Bargsted, Ramirez-Vielma and Yeves (2019) point out that work design is a process that is coupled to how work processes are designed and structured within an organisation.

In order to understand the relationship between work design and job satisfaction, this literature review covers a description of work design as well as three major theories namely, Herzberg's (two-factor theory), Hackman and Oldham's job characteristics model (JCM) and Trist's sociotechnical systems (STS), (Parker, Wall and Cordery 2001). The unprecedented COVID-19 pandemic has also posed many challenges at work and hence remote working shall be briefly examined. According to Wang, Liu, Qian and Parker (2021), work design is one of the most prominent theoretical outlooks in remote working literature. The literature review also considers emerging technology and its impact on work design. The four key dimensions of the WDQ by Morgeson and Humphrey (2006) namely, task characteristics, knowledge characteristics, social characteristics and work content shall form the framework of the study, in relation to job satisfaction.

## 2.2 HISTORICAL DEVELOPMENTS OF WORK DESIGN

In a study by Parker, Wall and Cordery (2001), the seminal work and origins of work design could be traced back to the United Kingdom close to the time of the industrial revolution. To enhance work performance, division of labour was utilised by simplifying complex jobs. These concepts underscored the advantages of such job simplification in terms of employing workers that were less skilled and resulted in cheaper labour. The aforesaid claimed that job simplification was given further impetus through time-and-motion studies in scientific management which started in the early 20<sup>th</sup> century when the concept of work design was brought to the attention of organisational scholars. This started a movement with a study of whether enhancing social and environmental conditions would improve employee satisfaction, motivation, comfort and productivity. The introduction of 'Scientific Management' lent itself to the determination of the most efficient method to accomplish work tasks and the concept of *lean* (Hopp and Spearman 2021). This idea influenced the flow of work from individual workers to engineers and managers, which in turn set up the concept of monitoring employees' work by using a moving assembly line, that was utilised by Ford in the motor industry (Attaran 2017). Further research in the UK and the US, advanced that simplified jobs led to boredom and dissatisfaction as well as being potentially detrimental to psychological health. To mitigate these challenges, concepts such as job rotation and job enlargement developed (Amoakoh 2018). This led to the emergence of the three most influential work design theories to date namely the sociotechnical systems theory, the motivation-hygiene theory and the job characteristics model (Unutmaz 2014). In the mid-twentieth century the sociotechnical systems theory was conceptualised, which supported teamwork rather than the individual in terms of work design (Parker *et.al* 2001). The aforesaid further pointed out that roots of contemporary work design research were underpinned by scholars in the decades to follow who advanced that jobs could be enhanced to increase motivation and satisfaction. During the 1970s, Hackman and others integrated previous ideas of work design and fashioned the job characteristics model (JCM) (Grant and Parker 2009). Over the past several decades, advances in industrial and information technologies amongst others, have had a profound impact on the work design theoretical landscape as seen in Figure 2.1.

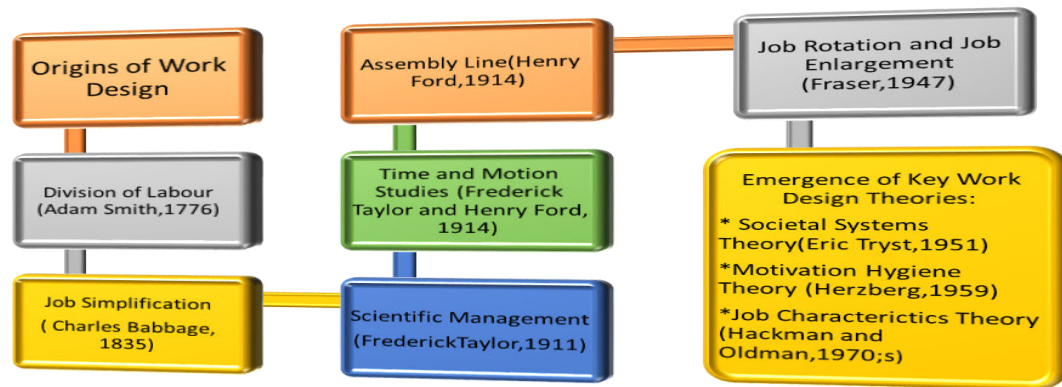


Figure 2.1 Chronological Development of Work Design adapted from Parker, Wall and Cordery (2001).

## 2.3 THEORETICAL FRAMEWORK

In a study by Dawal, Ismail and Taha (2011), the job diagnostic survey (JDS) by Hackman and Oldham (1975) was utilised to measure work design factors and create correlations with job satisfaction. Sutherland (2020) pointed out that one of the purposes of the JDS was to identify ways for job satisfaction to be increased by redesigning jobs. However, the JDS was found to have shortcomings. In 2006, Morgeson and Humphrey created the WDQ that integrated more work characteristics and corrected deficiencies in the JDS by Hackman and Oldham (1976), where low internal consistency and questionable psychometric properties were cited. Although the JDS became the dominant model of work design, it is not without its critics, and over time, scholars recognised that the JDS was only a subset of the job characteristics that influence a worker's behaviour and experiences.

Campion and Thayer (1985), in order to address the weaknesses, developed the broader multi-method job design questionnaire (MJDQ). However, even this was not an adequate instrument. Hence, there has been little new theoretical work done in work design over the past few decades. To address this gap, Morgeson and Humphrey (2006) developed the WDQ that builds on existing research and focusses on work design as opposed to the narrower concept of job design. Furthermore, too many terms have been used to describe similar work characteristics that are defined as the aspects of the job, task, social and organisational environment (Morgeson and Humphrey 2006). On the other hand, Moussa, Bright and Varua (2017) argue that the WDQ attempts to address the conceptual narrowness of the JCM, and includes contextual characteristics such as physical activities, ergonomics and machinery/equipment. They favour the WDQ in terms of inter-industry and occupation-specific knowledge work productivity to other models.

In a study by (Onimole 2015; Sharma and Bora 2020), factors such as job enlargement, job rotation and job enrichment were seen to have a positive effect on motivation. He further advances that psychological literature on employee motivation claims that work design, its structure and content may impact employee motivation, productivity and morale. Advocates of human relations in reaction to earlier scientific management philosophies encouraged the method of matching workers to machinery and equipment rather than altering the nature of work itself. However, in another study Buchanan and McCalman (2018) argues that specialised and simplified work led to boredom, frustration and dissatisfied workers that consequently resulted in job turnover, absenteeism and late coming. The aforesaid posits further that in an attempt to reduce boredom and increase job satisfaction, it is suggested that introducing more techniques of work design such as job enlargement, job rotation and job enrichment would benefit the workers.

Job enlargement is the addition of more related tasks to an existing job that alters the work cycle, in order to make it less tedious. Job rotation deals with the movement of a worker between different jobs to enhance variety and experience. Job enrichment is a method of motivating workers by allowing them to use more autonomy, and a variety of skills to complete a whole task. The aforementioned factors are based on Herzberg's (1959) theory of motivation-hygiene, which can be used to motivate

workers and give them a sense of accomplishment. The term hygiene refers to environmental factors, for example, unhealthy and hazardous working conditions (Marta, Supartha, Dewi and Wibawa 2020).

There is no doubt that workplace health and safety forms an important goal of work design. Health insurance claims and disability costs related to workplace illnesses have increased rapidly in the United States (Hartung 2021). Work design interventions that include good lighting, machine guards and better ventilation are required to mitigate such illnesses or accidents. Other fundamental workplace requirements such as protection from noise, safe weightlifting and stretching limits, rest breaks to protect against fatigue and attention span, and prominent display of health and safety signs must be incorporated into the work routine (Attewell, Huey, Moray and Sanderson 1995; Hofmann and Tetrick 2003; Edelman and Kudzma 2021). This is supported by Roy, Van der Weijden and de Vries (2017) who argue that doctors suffer from burnout due to adverse physical working conditions, fatigue and scarce resources. Attewell *et al.* (1995) postulate that in future, work design needs to be broadened to address more psychological and social factors in the workplace. The spike in cases of musculoskeletal disorders, the so-called 'repetitive strain disorders', in the United States is often attributable to computer terminal jobs that create stress on the wrist, neck and upper back. These conditions could extend from less severe to serious such as in carpal tunnel syndrome which affects the fingers and wrist and is extremely sore. Consequently, these factors could lead to poor employee morale and affect productivity. The authors further advance the view that present work design responses to repetitive strain disorders include job rotation, improving work-group dynamics and scheduling adequate rest breaks, together with designing better equipment and furniture such as suitable monitors, keyboards and chairs (Chihara and Seo 2017).

A study by Gibbs (2017) highlights how new technology has impacted job design. He explains that many routine and manual activities at work have been automated, and how the information technology revolution has affected jobs and the labour market. Automation is responsible for replacing workers and aggravating job losses. However, new technologies have been found to complement many tasks, hence improving quality, innovation and productivity. Technology has also been associated with enabling high-skill jobs to be more intrinsically motivating. Numerous manual and



repetitive tasks have been automated, and information technology has provided greater access to data, telecommunications and analysis tools which allow workers to collaborate and interact in terms of promoting innovation and continuous improvement. The author's statements are corroborated by Gruchmann, Mies, Neukirchen and Gold (2020), who advance that logistics through automation and revised ergonomic practices could be implemented to reduce manual work.

A study by Jain and Ranjan (2020), relating to the implications of emerging technologies on the future of work, it is revealed that artificial intelligence, robotics process automation, cloud computing and machine learning are leading the way in which work is to be done. Though the aforesaid authors caution that adequate training, skills and knowledge are required to keep abreast in this era of high-end technology. Caputo Greco, Fera and Macchiaroli (2019), suggest the use of digitalisation of manufacturing processes to mitigate repetitive actions, manual handling and biomechanical overload in assembly lines. The afore mentioned authors also point out that the use of this technology may reduce ergonomic risks such as excessive exposure to exerted forces on the upper limbs and posture. However, Gibbs (2017), claims that technology has been found to polarise labour markets due to relatively less demand for mid-skill employees and increased demand for high-skill employees. Furthermore, the pace of machines and instruments is often too quick, especially in performing cognitive tasks that employees found difficult to cope with and adapt to. This notion is supported by Gruchmann, Mies, Neukirchen and Gold (2021), who revealed that the tensions experienced by blue-collar workers for technological change processes constitute a major hurdle, although ergonomic initiatives convey clear advantages. Roskams and Haynes (2021), further postulate in a study that the assessment of the environmental demands and resources may improve workplace intervention outcomes. Several workplace environment factors are investigated and used to create a more suitable workspace through environmental crafting by maximising resources and minimising demands.

The following table illustrates the environmental demands and how environmental resources and environmental crafting is used to mitigate the influence.

Table 2.1 Results of the conceptual analysis of the multidisciplinary workplace environment.

<i>Workplace environment factor</i>	<i>Environmental demands</i>	<i>Environmental resources</i>	<i>Environmental crafting</i>
Indoor air quality	Stickiness & displeasing odours	Pleasing odours	None
Thermal environment	Unpleasantly too hot or unpleasantly too cold	Climate control to mitigate unpleasant changes in temperature	Cooling mechanisms; personal heating appliances eg. heater
Acoustic environment	Too noisy, too disturbing sounds	Beneficial sounds such as soothing music or relevant work-related speech	Ear muffs or ear pieces, and using spatial distancing.
Luminous environment	Inadequate lighting, restricted natural light	Specialised and preferential lighting	None
Spatial layout	Distractions of an auditory or visual nature and perceived overcrowding	Beneficial work related and non-work-related communication	Provision for adequate space and time crafting
Biophilic design	None	None	None

<i>Workplace environment factor</i>	<i>Environmental demands</i>	<i>Environmental resources</i>	<i>Environmental crafting</i>
Autonomy/control	Bereft of autonomy and control	None	Personal heating, audio equipment and sufficient spatial distancing
Territoriality/ownership	None	Impression of belonging and ownership	None
Privacy/crowding	Bereft of privacy and spatially crowded	None	None
Aesthetic design	None	Pleasing design that has a gratifying effect	None
Ergonomic design	Furniture or equipment that is not suitable in terms of comfort and productivity	None	None

*Source: Adapted from Roskams and Haynes (2021).*

In recent years, a shift to a more environmentally friendly perspective on work design has emerged by Bangwal, et al. (2017), who assert that “green buildings” are burgeoning and becoming common place around the world. Zeigler as cited in Bangwal *et al.* (2017), defines green buildings as an environment-friendly and sustainable building design which is constructed to reduce the impact of climate change, where optimum use of energy, water and materials within the area and building is engaged over the life cycle of a building. The authors further argue that workplace design may negatively affect the physical health of employees (e. g. respiratory illnesses and asthma), due to lack of proper ventilation. They also highlight the dangers of insufficient lighting, inadequate space and high levels of noise that

could lead to psychological illnesses, for example, stress and depression. They suggest further that a mutual effort from management and staff be forged to address health issues and improve productivity, health and safety by forming green committees.

Studies of such physical conditions and ergonomics have revealed that adverse health conditions could lead to lower productivity, absenteeism and job dissatisfaction. Bangwal *et al.* (2017), further posit that due to the green building workplace design, improvements in thermal comfort, lighting conditions and air quality, reduced absenteeism and increased job satisfaction.

In a study that focussed on ship design and operational demand by Mallam and Lundh (2016), focus groups, in general, regarded operational flexibility favourably in terms of the physical environment, work tasks and general arrangement. The term operational flexibility in this context refers to the adaptable physical design and layout decisions that facilitate task organisation, performance and execution. The crew is required to carry out various tasks such as traffic density, geography, weather and maintenance schedules and the adaptable physical work environment allows them more flexibility that results in enhanced efficiency and safety standards. The respondents noted distinct advantages in having control systems close to the engine rooms that afforded them a better sense of judgement in terms of appraising and reporting any threats that may develop. Technological solutions such as remote-control systems mediated between the physical presence of crew members being at the work sites or being elsewhere undertaking other tasks simultaneously. This helps advance more flexibility in terms of team organisation and optimum placement of crew staff.

A study by Wang, Lui, Qian and Parker (2021), reveal that as information and communication technologies have advanced, so too has work design. Remote working has become more prevalent with greater availability of high-speed internet, and more flexible working arrangements. The concept of teleworking (remote working) as described by Mann and Holdsworth (2003), originated in the 1970s when the oil crisis in America forced some employees to carry out work at home. Since then, the idea of remote working has gathered great momentum and is being used widely as an alternative to office-based work design. In March 2019, South Africa like many other countries in the world were placed on hard lockdown due to the aggressive spreading

and infection rate of the COVID-19 flu pandemic. Due to lockdown protocols, many companies were forced to shut down completely and only certain industries that were critical to the running of the economy were allowed to operate, however at limited capacity. Workers were forced to stay at home on a larger scale, or work from home to mitigate the spreading of COVID-19 infections. This remote manner of working has since altered the landscape of work design and contributed to the hybrid work design model that is being practised extensively today. Wang *et al.* (2021) in part of their study, have used three themes to illustrate the challenges and the impact of remote working on employees, in terms of work design. The themes comprise remote work challenges, virtual work characteristics and individual factors (personal traits).

## **2.4 THEORIES AND INFLUENCES ON WORK DESIGN**

According to Ikonne and Jacob (2014), the low rate or lack of job satisfaction has been attributed, amongst other things, to a deterioration in the working environment of an organisation, as this could lead to increased labour turnover. Therefore, this study seeks to address the problem of how work design may impact job satisfaction at eThekweni Electricity stores. Bangwal *et al.* (2017), define work design as a feature through which a green workplace could positively influence an organisation and staff by driving a message of brand excellence, authority and synergy. Raharjo, Nurjannah, Solimun and Fernandes (2018), define work design as an alternative approach to enhance job satisfaction while improving the motivational potential of a job, while Wardley, Belanger and Nadeau (2017), assert that work design provides structure to an organisation and assists in forming important outcomes for the stakeholders. Siengthai and Pila-Ngarm (2016), describe work design as one of the effective ways to increase job satisfaction and enhance the motivation of employees by improving working conditions.

### **2.4.1 MOTIVATION-HYGIENE THEORY (HERZBERG)**

A study by Hur (2018), examines Herzberg's (1959) motivation-hygiene. According to this theory, 'motivators' are a set of factors that are linked to the feeling of satisfaction, while 'hygiene factors' are a set of factors related to the feeling of dissatisfaction. According to the afore mentioned, the motivators are associated with work itself and included factors such as achievement, recognition, responsibility and self-

development opportunities, while hygiene factors are related to the environment and working conditions such as company policies, salary, fringe benefits and work relationships. Generally, Herzberg's (1959) motivators are linked to higher-order needs, as opposed to hygiene factors that are associated with lower-order needs as depicted in Maslow's need hierarchy (Osemeke and Adegboyega, 2017). Another study by Giese and Avoseh (2018), regards work itself as one of the most significant predictors of job satisfaction. They further advance that a huge motivating factor was delegating responsibility to workers so that more time was freed up for managers to attend to other key tasks. Workers who were delegated more responsibilities and autonomy experienced more job satisfaction, which further supports the motivation-hygiene theory. Özsoy (2019), posits that while the existence of hygiene factors does not necessarily increase motivation, the absence of it leads to dissatisfaction. He further claims that when motivation factors are present, motivation increases. Hackman and Oldham (1976) explain that although the Herzberg (1959) theory has inspired a great amount of research and contributed to numerous successful change projects concerning work redesign, there have been a few shortcomings. An example would be the inability of numerous researchers to provide empirical backing for the major principles of the two-factor theory itself. Additionally, the theory fails to provide any divergence among workers in terms of their likely responsiveness to 'enriched' jobs. Finally, the present theory cannot specify how the existence or non-existence of motivating factors could be determined for existing jobs.

#### **2.4.2 HACKMAN AND OLDHAM'S JOB CHARACTERISTIC MODEL (JCM)**

Moussa et al. (2017), regard the job characteristics model as the most established human resource management motivational work design theory. Ali, Said, Yunus, Kader, Latif and Munap (2013), state that Hackman and Oldham's (1970) JCM, identified five core job dimensions as skill variety, task identity, task significance, autonomy and feedback which is believed to be linked to certain personal and work-related outcomes, including job satisfaction. The afore mentioned authors further add that the prevalence of job satisfaction in the workplace creates a positive effect on employees by reinforcing and incentivising them to carry out their tasks productively, thus contributing toward organisational effectiveness.

Earlier studies confirmed that the predictive validity of job characteristics had on job performance (Pandey and Welch, 2005; Grant, 2008; Allan, Duffy, and Collisson, 2018). The JCM argues that the effective design of jobs can, in fact, improve employee morale and variety, task identity, task significance and feedback and influence work-related and personal outcomes. This is further corroborated by Raihan (2020), who explains that this theory was developed in order to create fundamental characteristics required to facilitate conditions for performance, high work motivation and job satisfaction. In a study by Ali *et al.* (2013), it was found that the success of any organisation depended on a whole group of individuals that included supervisors and subordinates, and their perceptions of their work. The aforesaid also used Hackman and Oldham's job characteristics model (JCM) to determine which of the five dimensions contributed most to job satisfaction among fast food outlets. In a study by Moussa *et al.* (2017), where design theories are studied to investigate knowledge workers, they argue that while the JCM is quite appropriate for a broad range of industries and jobs, it was found to be only marginally focussed on motivational and task dimension aspects of a job.

The five core dimensions of the JCM are briefly described as follows:

- a) *Skill variety* – The extent to which various skills and talents of a worker are used to complete a job that requires a variety of tasks to be undertaken.
- b) *Task identity* – The extent to which a job can be identified in terms of completeness from start to end.
- c) *Task significance* – The extent to which the job has an impact on the lives of those within the organisation or outside the working environment.
- d) *Autonomy* – The extent to which the job allows an employee to independently control and determine the processes and outcome of his activities.
- e) *Feedback* – The extent to which the employee receives information regarding his work performance from his superiors or colleagues.

### 2.4.3 SOCIOTECHNICAL SYSTEMS THEORY (STS)

Anya (2015), explains that the STS was conceptualised by Eric Trist (1951) in the twentieth century, who pioneered a broader organisational outlook on work design that focussed on teamwork rather than individuals. The primary goal of this theory is to incorporate the social and technical aspects of work design, to enhance job satisfaction and improve productivity. This design process highlights the importance of the relationship among worker interdependencies, technology and the work environment to augment autonomous work groups, which underpins the formation of team-based structures now prevalent in the working environment.

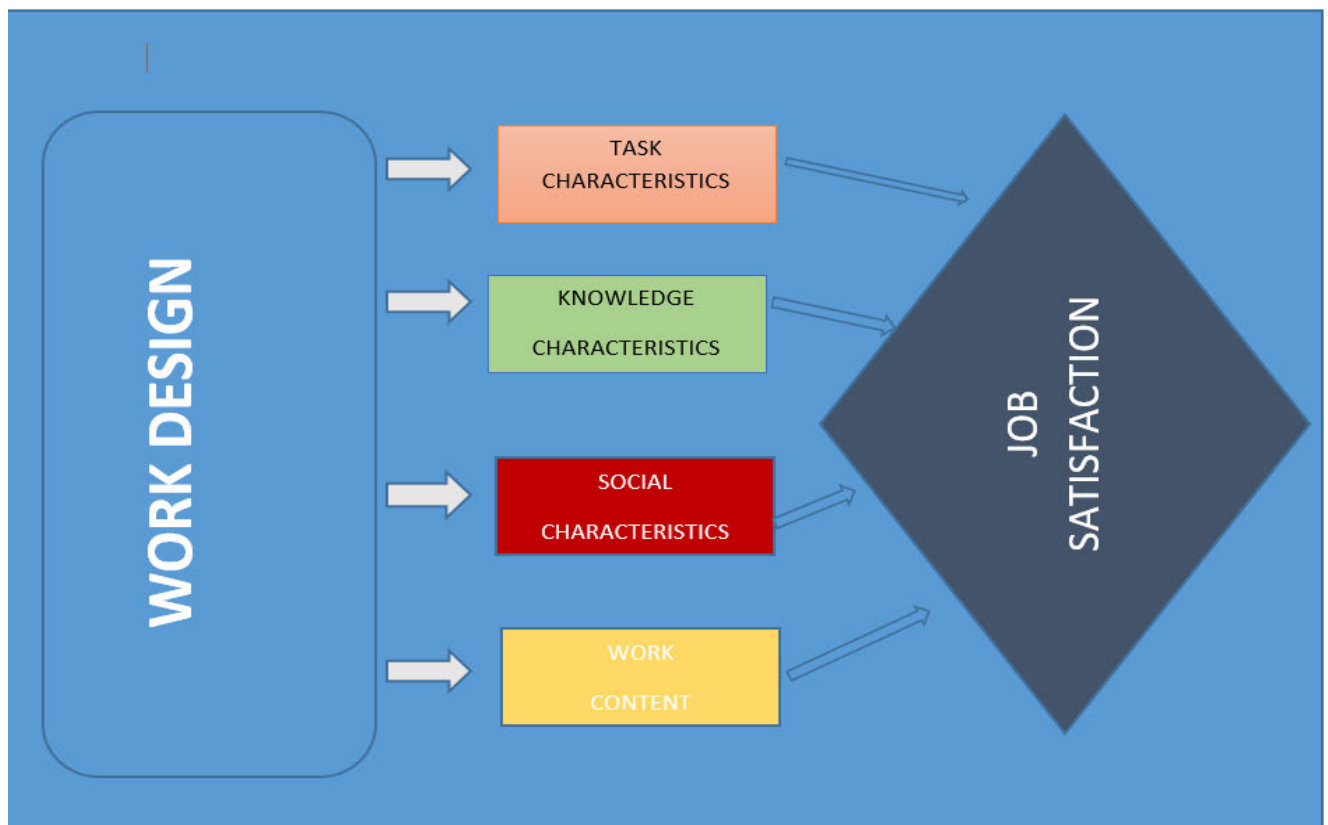


Figure 2.2 Conceptual framework proposed model (Self-Generated)

Sutherland (2020), in her thesis, explains that over time numerous theories have been advanced to demonstrate job satisfaction and its impact on workplace behaviours. The next section introduces and conceptualises job satisfaction and summarises three



prominent categories of theories: Herzberg's two-factor model (1959), needs theory (Maslow 1954) and McClelland's need theory (1960), (Osemeke and Adegboyega 2017). The next section shall also cover a brief discussion on the correlation between work design and job satisfaction.

## **2.5 JOB SATISFACTION**

### **2.5.1 OVERVIEW**

Job Satisfaction is defined by Garbarino, Tripepi and Magnavita (2020), as being in a positive emotional state, which translates to a positive impact on individuals' job-related experiences, and their perceptions regarding work. Alternatively, Moe, Pazzaglia and Ronconi (2010) describe job satisfaction, in general, as an aspect of work that often relates to the well-being of the worker.

A study regarding factors influencing job satisfaction in the hospitality industry by Heimerl, Haid, Benedikt and Scholl-Grissemann (2020), reveals that opportunities for promotion and further training may lead to increases in overall job satisfaction. However, the longer working hours and workload contributed to less job satisfaction. Practical conclusions to enhance job satisfaction that can be drawn from this study, include more participation by staff in decision making, adjusting working hours and workload to suit individual employees and expanding training programs. In another study where the influence of job satisfaction, resilience and work engagements in terms of turnover intention among village doctors in China, Zhang, Bian, Bai, Kong, Liu, Chen and Li (2020), argues that higher job satisfaction, resilience and work engagement contributes to reduced turnover intention. It was also found that work-related dimensions such as work promotions, higher salaries and more training opportunities increased job satisfaction, resilience and work engagements reduced the number of doctors leaving work in the villages.

Numerous theories have been advanced to understand the concept of job satisfaction. Amid the most famous theories are the ones proposed by Maslow (1954) and Herzberg (1959), who used the concept of motivation to advance the satisfaction of human needs. Maslow grouped these needs according to a hierarchy, where basic

survival and safety needs formed the base, through a sense of belonging and self-esteem to higher levels of needs such as self-realisation (Osemeke and Adegboyega 2017).

Rybnicek, Bergner and Gutschelhofer (2019), advance a motivation theory known as McClelland's theory of needs. The theory proposes that employees seek to fulfil various needs at work by being motivated by the employer through rewards. Work motivation is enhanced when the fulfilment of the internal needs of employees are satisfied by the external work environment through rewards such as promotions, company cars and health benefits.

While in another study, Raziq and Maulabakhsh (2015), argue that a positive relationship exists between the working environment and job satisfaction. The authors further advance that to improve productivity, efficiency and job commitment, the employer must ensure favourable working conditions such as job safety, security, flexible working hours and upper management support. It was also found that a good working environment encourages employee loyalty and a sense of ownership among employees, which conclusively improves organisational effectiveness as well as reduces costs that may arise from dissatisfied employees. In support of this, Moras (2021), explain that independence and autonomy are integral in terms of enhancing job satisfaction. The authors further claim that an employee who is satisfied in his job is more willing to take on responsibility and ownership of the tasks he performs, and becomes more punctual, self-motivated and is an asset to the institution that he works for. While in another study Daniels, Gedikli, Watson, Semkina and Vaughn (2017), argue that the introduction of a new resource planning system had an adverse effect on job satisfaction. Although high autonomy was created, training opportunities and development were not extensive enough. Findings suggest that if autonomy is to be used as a motivator for job satisfaction, then proper training and guidance must be also administered by the employer.

A study on disability, workplace characteristics and job satisfaction reveals that workers with disabilities report lower levels of job satisfaction in comparison with their able-bodied counterparts. Disabled workers who are visually impaired experienced the

most negative effects in terms of job satisfaction as compared to disabled workers with speech impediments. However, when workplace characteristics such as harassment, discrimination, risk of injury and threat of layoff and other problems, the disabled workers experienced the same job satisfaction as able-bodied workers. Some other results present as males being more likely to be satisfied with their jobs than females. Results for relative income indicate that workers are more satisfied with their jobs if they earn more than others with similar job profiles. The authors suggest that persons with disabilities could promote the development of the South African labour market and be employed to occupy meaningful roles according to their skills and talent. It was also found in the study that workers with disabilities generally experienced challenges in terms of promotion and had restricted opportunities to advance their careers (Uppal, 2005; Potgieter, Coetzee and Ximba, 2017). Herzog, Buchmeister and Harih (2019), describe work as one of the basic factors of human life and explain that appropriate workplace design is even more important when relating to workers with disabilities. The authors further point out that workers with disabilities are generally more prone to stress at work, and organisations find it difficult to identify suitable workplaces and integrate them with able bodied workers.

An investigation into the determinants of job satisfaction and the improvement in the quality of work life of grassroots social workers was conducted, where the findings of the study indicated a preference by social workers for adequate and fair remuneration packages as the highest priority for increasing job satisfaction. The workers also valued verbal recognition, sincere appreciation, and acknowledgement of their contribution to work. The social workers also highlighted the importance of the supervisor's contribution to their job satisfaction by providing motivation, supportive contact and feedback. Clarification of ill-defined policy and procedures together with creating a climate of trust added to job satisfaction as well. In another study, on the influence of job characteristics on employee's job satisfaction it was found that both psychological and job characteristics such as autonomy, feedback and task significance amongst others were important for job satisfaction. (Malherbe and Hendriks, 2004; Moras, 2021).

## 2.5.2 FACTORS OF JOB SATISFACTION

Nguyen (2020), in a study on Hanoi auditing firms, analyses factors affecting job satisfaction of accountants and auditors.

- a) *Working environment* – Organisations need to improve the quality of the work environment by reducing work pressure, developing appropriate rewards and regulations, and allocating compatible personnel to each job or task.
- b) *Relationship with co-workers* – Companies are required to create a fair and friendly work environment where policies encourage the coordination of workers to complete tasks together.
- c) *Training and Promotion opportunities* – Employees were found to be more satisfied and engaged with the company when receiving training, skills and knowledge that encouraged career advancement.
- d) *Income* – The employee's income is suggested to be based on the years of experience and commitment together with fair policies that represent a reasonable salary, bonus and allowances.

In another study by Bhardwaj, Mishra and Jain (2021), the following factors of job satisfaction were investigated at a banking firm.

- a) *Working hours* are the hours at work that may affect the job satisfaction of employees, where inappropriate time spent at work may affect time spent with family and friends.
- b) *Working conditions* refers to the physical environment of work such as temperature, air quality, ventilation, lighting and noise. The study reveals that employees may experience better job satisfaction if the physical environment is conducive to work.
- c) *Payment* is regarded as a key factor in job satisfaction where remuneration and reward for work are paramount. Employees are often motivated to even undertake additional work for fair compensation.
- d) *Work design* refers to the elements of physical and psychological factors such as autonomy, recognition, motivation and ergonomics that promote the of well-being employees.

- e) *Promotion* refers to the progression or advancement in an employee's job, which may result in the fulfilment of material and psychological needs.
- f) *Demographic features* include factors such as age, sex, experience and education that influence the level of job satisfaction.
- g) *The human resource department* involves the managing and recruitment processes of employees. This department is required to plan, create and conduct training programs and provide grants and advisory functions to employees.
- h) *Supervision* is management of an organisation that assumes the role of supervision and is key in realising job satisfaction among employees. There needs to be an element of respectability and good communication between management and staff, to influence job satisfaction in a positive way.
- i) *Stress* is regarded as a physical and mental imbalance that has a negative impact on employees. Stress can manifest itself in many ways such as uncertainty and work overload.

### **2.5.3 WORK DESIGN AND JOB SATISFACTION**

In a study by Raharjo, Nurjannah, Solimun and Fernandes (2018), work design is viewed as an alternative approach to increasing motivation and reducing job dissatisfaction. While Bangwal *et al.* (2017), argue that poor work design is a major contributing factor to low job satisfaction, and management together with employees must collaborate to improve health, safety and productivity. Raziq and Maulabakhsh (2015), in their findings, suggest that there is a positive relationship between the working environment and job satisfaction. The authors also postulate that a good working environment improves employee loyalty, levels of commitment, efficiency and productivity, which helps instil a sense of ownership that contributes positively toward organisational effectiveness. Onimole (2015), uses Herzberg's (1959) theory to advance various work design factors and their impact on job satisfaction. The author suggests that improvements in work design such as job content and physical working conditions may remove job dissatisfaction. However, the author focusses on motivation and psychological means to enhance job satisfaction. Factors such as recognition and appreciation of work by praising employees and assigning higher order of work or promotions were found to improve worker motivation. It was also found that subjecting capable employees to increased responsibility led to a sense of

empowerment and accomplishment, which in turn increased motivation. This is corroborated in a study by Raharjo *et al.* (2018), which suggests that employees who are highly involved in work design and practices are positively associated with job satisfaction. In another study relating to the effects of the physical environment design on teacher's workplace comfort by Atyah (2020), it is found that factors such as spatial layout, furniture quality, cleanliness and indoor environment quality enhanced the teacher's well-being, health, productivity and overall job satisfaction.

## **2.5.4 KEY THEORIES OF JOB SATISFACTION**

### **2.5.4.1      *HERZBERG 2-FACTOR MODEL***

Herzberg (1959), however, differentiated between intrinsic factors or 'job satisfiers', and extrinsic factors or 'job dissatisfiers'. Intrinsic factors are associated with work experience and processes and called 'motivators' because these were found to contribute to job satisfaction (James 2020). Extrinsic factors are referred to by Delobelle, Rawlinson, Ntuli, Malatsi, Decock and Depoorter (2011), as 'hygiene' factors that are associated with dissatisfaction when left unfulfilled. However, Warr and Inceoglu (2015) advance that the traditional construct of job satisfaction is complemented by a more invigorating one, referred to as job engagement. According to them, engaged workers feel more energised and motivated about work situations that go beyond mere job satisfaction.

The Herzberg (1959) model has remained popular with scholars, due to its simple interpretation and application in measuring the concept of job satisfaction (Jehanzeb and Mohanty 2018). However, according to Delobelle *et al.* (2011), organisational factors such as pay, promotion, working conditions and individual characteristics are related to job satisfaction. While Moras (2021), list the factors that influence job satisfaction such as salary, perks, supervision, work environment, company policies and procedures, career growth prospects and the relationship between colleagues and supervisors. However, Avey, Luthans, Smith and Palmer (2010) posit that, in behavioural sciences, particularly in occupational health psychology, the focus has been drawn specifically on the importance of physical and mental well-being in affecting success in numerous life domains, including the workplace.

Özsoy (2019), conducted an empirical test on Herzberg's (1959) two-factor motivation theory and found that salary contributed most to motivation followed (from highest to lowest) by achievement, work itself, working conditions, company policy and administration, advancement, personal life, relationship with supervisor, supervision, growth, relationship with peers, status, relationship with subordinates, recognition, responsibility, and lastly security. However, this study shows that hygiene factors such as salary, work conditions, relationship policy and administration and relationship with the supervisor had higher scores than any other motivation factors proposed in Herzberg's (1959) motivation theory, for example, recognition, advancement, responsibility and growth. The aforesaid author postulates that in terms of gender differences, it is found that females highlight motivation factors more than males, but concluded that there was no marked difference, hence were found to be similar. Another finding was the negative relationship between the average monthly income and the salary factor. The findings reveal that as the average monthly income increases, the motivator role of salary decreases. In this study, the basic assumptions associated with the Herzberg (1959) theory are supported; however, there are some discrepancies. The salary factor, which is considered to be a hygiene factor, was found to be the strongest motivating factor in this study. The study also reveals that changes in socioeconomic, cultural and developing countries could suggest differing outcomes, hence Herzberg's (1959) theory cannot be used without taking these factors into account and is viewed as a limitation.

Giese and Avoseh (2018), explain that participants appreciated the recognition and support of supervisors, and that lead to a feeling of accomplishment and achievement. The authors further advance that job security, salary and general lack of resources were key factors, however, Herzberg (1959) viewed these as hygiene factors that did not contribute to overall job satisfaction but prevented job dissatisfaction. The authors further add that interpersonal relations amongst colleagues had a remarkable influence on overall job satisfaction, while Herzberg (1959) simply regarded this just as a hygiene factor that prevented job dissatisfaction. This finding highlights the importance of a happy and friendly working environment that contributes greatly to job satisfaction. It was also found that supervision and leadership played an important role in creating a favourable working environment that was satisfying for workers. However, this study also recommends further research to explore personal and job

characteristics and their influence on overall job satisfaction. Hayes, Bonner and Douglas (2015) conducted a study in a nursing work environment where stress, job satisfaction and burnout were examined. It was found that nurses were generally satisfied, but experienced stressors related to the relationships with patients and the impact of recurrent grief.

A study by Montañez-Juan, García-Buades, Sora-Miana, Ortiz-Bonnín, and Caballer-Hernández, (2019), which examines the moderating role of organisational justice in terms of work design and job satisfaction suggests that both work design and efforts to treat workers fairly have a positive effect on job satisfaction. The authors further claim that organisations need to invest efforts to improve work design focussing on task characteristics and social characteristics, and managers should view employee fit as a strategy to encourage higher levels of job satisfaction. Although job satisfaction is important for the well-being of workers, it also affects employee absenteeism, turnover and performance.

#### **2.5.4.2      *NEEDS THEORY***

Maslow (1954) explains that the fundamentals of the needs theory are based on the following assumptions (Osemeke and Adegboyega 2017):

- a) Humans are continually seeking to satisfy their needs and these needs cannot be fully satisfied.
- b) Needs that are satisfied at a level cannot help to motivate individuals continually until the needs of a higher level are met.
- c) The needs of humans to move from one level to another is not intentional.

#### **2.5.4.3      *MCCLELLAND'S NEED THEORY***

A neuroscientific study by Rybníček, Bergner and Gutschelhofer (2019), on how individual needs influence motivation effects, reveals that a personality-based reward system be matched for individual employees since unique neural activations for certain rewards were produced when linked to particular needs. This finding validates McClelland's crucial assumption that work motivation is related to a personality-based approach.



## **2.6 IMPLICATIONS OF COVID-19 PANDEMIC ON WORK DESIGN**

Due to the COVID-19 pandemic that enforced a hard lockdown in South Africa from March 2020, the work design arrangements at eThekweni Municipality Electricity stores have changed. Alam and Shin (2020), support this notion by explaining that organisations have been forced to experiment with varying working practices such as remote working or adopting a hybrid work design model. They also believe that work patterns in future shall also change depending on forthcoming circumstances. Health and safety regulations have been instituted to curb the rampant spreading of infections at work. Those employees with co-morbidities such as high blood pressure, heart ailments, diabetes and respiratory diseases were requested to stay at home and work remotely if possible. The working environment was set up with sanitation stations, floor markings (two metres apart) and signboards that display COVID-19 guidelines. Mask wearing is compulsory for all staff, and social distancing was strongly enforced. Workstations have been set apart as much as possible, with plastic screens creating barriers between customers and staff.

## **2.7 PREVIOUS STUDIES DONE ON THIS TOPIC**

In a study by Chihara and Seo (2017), the work environment was redesigned to reduce the physical workload by minimising the average and maximum joint movements and adjusting the worktable height. The implementation of this method was shown to minimise the workload and avert musculoskeletal disorders. Akinwale and George (2020), reveals in a study that the retention rate of nurses in government tertiary hospitals would be improved when issues relating to job satisfaction are addressed. The relationship between the work environment and job satisfaction among new Master of Social Work graduates was studied by (Choi, Koo and Fortune 2020). The regression analysis in the study highlighted the positive association between atmosphere, effectiveness of service delivery and quality of working relationship with job satisfaction. In another study, Fahr (2011) argues that those employees with an enriched work design experienced a higher level of job satisfaction. An enriched work design in this context is referred to by a high degree of autonomy and multitasking. In a study by Shareef, Husien and Omer (2018), an enhanced interior physical work

design that included improved furniture layout, comfort, natural lighting, plants and improved air quality, had a positive effect on job satisfaction.

## **2.8 LIMITATIONS OF THE WDQ**

As much as the WDQ has proven reliability and validity and is regarded as the most conceptually consistent and methodologically suited human resources management work design theory by Moussa *et al.* (2017), the WDQ is not without limitations. Morgeson and Humphrey (2006) highlight a few limitations. Firstly, the data collected from respondents were taken from both the WDQ measures and satisfaction simultaneously, which may have inflated the relationship between them. Secondly, the gathered data was not from a wide variety of different jobs. The sample was predominantly taken from respondents at management level. Finally, there were only direct relationships between the WDQ scales and outcomes, hence the moderating factor was omitted. It is suggested that a more accurate assessment may have been attained if the outcomes were moderated by individual differences.

## **2.9 CASE STUDY BACKGROUND**

In terms of ergonomics, the physical environment at Springfield Main Stores remains a huge concern. The stores are in close proximity to a large landfill site that may pose serious health risks to employees. The landfill is responsible for creating dust, greenhouse gases (methane), and a foul odour that emanates from it periodically. Conversations with employees have pointed to them complaining of headaches, nausea and other respiratory ailments. While these complaints have been brought to the attention of higher management little consideration has been given to date. The stores' racks and shelving are often coated with fine dust and sediment; as a result, the stores' area is often poorly ventilated due to the closed windows and doors. Fans are used to cool the stores down, but in turn, circulate the fine dust that may be affecting the health of employees. Certain staff members have also been complaining of neck and back aches. Springfield Main Stores hold stock that is quite heavy in mass, and in some cases, packaged very awkwardly. Although safe working loads (as per ISO9001 standards) are adhered to mostly, some staff members tend to ignore the rules at times. This has led to numerous injured on duty (IOD) incidents. Ergonomic factors such as poor posture and failure to adhere to safety weight limits are viewed as potential causes of IOD incidents. During summer, the stores' area becomes

intolerably hot and humid. The doors and windows are kept closed to prevent dust and sediment from getting into the stores from the landfill site, as previously mentioned. Staff are often forced to take off their personal protective wear (overalls, gloves and hats) due to the intense humidity.

These actions contravene the Health and Safety Act of 1993 and expose the staff to further injury. Mechanical equipment such as trolley jacks and lifts are often dysfunctional. Due to the lack of capital funds and unavailability of spare parts; mechanical equipment especially the lifts cannot be repaired. Staff are then required to use the staircase to carry stock to and from the floor locations, which has obvious safety and health implications. There were cases when stores' staff were trapped in the lifts for hours due to the lifts breaking down. These incidents not only have the potential to cause physical distress but may affect staff psychologically as well. These hazardous factors do not just affect employees of the Municipality but affect service delivery and customer service to the greater metropolitan region. Another aspect that frustrated employees was the introduction of a new resource planning system Jack Dan Edwards (JDE). The system is fraught with technical glitches and the impact on operations has had far reaching consequences from laboured service delivery to unprecedented downtime that has created backlogs and increased demand for overtime. The physical work environment has seemingly created distinct frustrations and would probably affect the job satisfaction of staff. The job satisfaction indicators towards the end of this study will shed more light on the subject.

The next chapter examines the research design and methodology of the study.

## **CHAPTER THREE: RESEARCH METHODOLOGY AND DESIGN**

### **3.1 INTRODUCTION**

This chapter covers the research design, type of sampling and measuring instruments, among other factors, to be used for investigating the work design at eThekweni Electricity stores and the impact it has on job satisfaction. Bryman (2016) postulate that research methodology is essential when making a choice on which research methods to use in a study, and to be aware of the sequences and processes required to follow when applying that method. Tight (2017), points out that the choice of the methodology used in a study is chiefly dependent on the personal preferences of the researcher, for example, a positivist would most likely take a scientific perspective on matters, hence selecting the quantitative method that would allow him to test hypotheses and measure items. This study shall utilise the mixed-method approach. Further, an adapted version of the WDQ by Morgeson and Humphrey (2006), was used as the measuring instrument for the work design dimensions. The measuring instruments applied include online questionnaires together with semi-structured interview sessions. The simple random sampling method was to be adopted to select participants from the sampling frame. The following sections deal with research objectives and research design.

### **3.2 PRINCIPLES OF RESEARCH METHODOLOGY AND DESIGN**

Tight (2017), describes research design as a framework for the collection and analysis of data where the choice of research design is prioritised by the range of dimensions within the research process. This study is of a descriptive nature and adopted a mixed-method research design, where some qualitative data would be used together with largely quantitative techniques.

Creswell (2015), defines mixed method research as a research methodology that involves the collection and analysis of both quantitative and qualitative data based on research questions for conducting a study in the social, health and behavioural sciences sectors. Mixed methods research has come of age, and to adopt either a qualitative or quantitative method exclusively, falls short of the major approaches utilised in human and social sciences. Additionally, the aforesaid author advances that

the mixed methods approach employs strategies of inquiry. The mixed methods research combines both the quantitative and qualitative research methods within a single project.

The data collection entails collecting both numeric data such as instruments together with text information for example face-to-face interviews, to arrive at a final database that represents both qualitative and quantitative information (Creswell and Creswell, 2005; Bryman, 2016). Hence this study employs the mixed method which is most suitable for assessing the influence of work design on job satisfaction at eThekwini Electricity stores.

### **3.2.1 MIXED METHODS APPROACH**

This study used the mixed method research design. (Creswell, 2015; Schindler 2019), suggests that the mixed methods approach affords the researcher the use of combining both quantitative and qualitative data, to arrive at a more holistic understanding of the research problem. However, he cautions that the mixed method design does not necessarily mean just gathering both quantitative and qualitative data. Moreover, the author suggests that the purposeful selection of participants through qualitative sampling could help understand the central phenomenon better.

#### **3.2.1.1 *RATIONALE FOR MIXED METHODS***

For the purpose of this study, the mixed methods research design was used. In a convergent design, the integrity of merged data is crucial when utilising the two data sources from quantitative and qualitative approaches (Creswell, 2015). Hence, the mixed methods approach was employed to address the following study objectives:

- a) To identify work designs and ergonomic factors, and to explore the correlations between them and job satisfaction at eThekwini Electricity stores.
- b) To analyse work designs and ergonomic factors to develop methods that can simplify and streamline work processes at stores.
- c) To investigate the relationship between work designs, ergonomic factors and job satisfaction, and to identify a better fit that could improve production and employee contentment.

d) To examine current processes at stores and recommend improved work designs and ergonomic interventions, for a more comfortable and safer working environment.

A convergent design approach is being followed in this study. The convergent designs allow the researcher to use data collected and analysed from quantitative and qualitative methods and merge the results of the two sets with the intention of comparing the results.

Creswell (2015), lists the *elements of mixed-method approach* as follows:

- a) The use of meticulous quantitative and qualitative methods
- b) Periodically outlining the design within a theory or philosophy
- c) Combining quantitative and qualitative data utilising a particular type of mixed design method, and the elucidation thereof.
- d) Analysing and collecting quantitative and qualitative data in acknowledgement of research questions.

The next section describes data collection, and the techniques and methods involved.

### **3.3 DATA COLLECTION**

The sampling population will be identified and briefed in a meeting on all issues pertaining to the study. All ethical issues will be dealt with thoroughly and subjects will be given every opportunity to enquire or pose any questions. All items on the questionnaires will be fully explained, and then the questionnaires will be administered to all participants within the chosen sampling frame. Due to the unprecedented COVID-19 pandemic, online methods of questionnaire dissemination will take place. Invitation forms to participate were administered to all members of the sampling frame two weeks prior to the commencement of the study.

#### **3.3.1 DATA COLLECTION TECHNIQUES AND METHOD**

The analysis and interpretation of results from this study shall utilise data from instruments such as questionnaires, personal interviews and staff opinions from observations as supported by Bryman (2006), who describes triangulation as the correspondence, convergence, or results from different methods that seek to

corroborate qualitative and quantitative data. Employees from the stores department of eThekwini Electricity were selected for the purpose of this study. The employees comprised lower-level general workers, middle-level storekeepers and middle- to upper-level line management staff. Structured questionnaires and semi-structured interview sessions shall be used to collect primary data, while the municipal library and human resources department shall be used to gather the secondary data. The primary and secondary data are discussed further below.

### **3.3.2 PRIMARY DATA**

According to Flick (2015), primary data refers to information that is more immediate and accessible to the researcher. In this study, close-ended questionnaires (Annexures A and B), and semi-structured interviews (Annexure C) were the instruments utilised to gather data from the selected sample of sixty (60) respondents consisting of twenty (20) storekeepers, thirty-nine (39) stores' attendants and one (1) staff member from line management at eThekwini Electricity stores. This formed the primary data of the study.

### **3.3.3 SECONDARY DATA**

In terms of secondary data, information such as policy, procedures, and rules governing the supply chain management of eThekwini Electricity shall be obtained from the municipal library and human resources department. Secondary data is usually the summarised and reworked version of data from primary sources (Flick, 2015). This information will be used to assist the researcher in getting a better perspective on work design models and current policy and procedures in the stores' department.

The next section examines the population/target population aspects of this study.

## **3.4 TARGET POPULATION**

A population is described as the study object that can comprise groups, individuals, organisations and events, or the conditions to which they are exposed.

Cooper and Schindler (2014), define a population as the total group of subjects we wish to focus upon in a research study. In this study, the population or sampling frame



comprises sixty-five (65) participants employed at twelve (12) stores throughout the greater eThekweni Metropolitan area. The population sample comprises store assistants, storekeepers and line management. Given that there are twelve stores, it will be practical to use the survey method as it is economical and most convenient. A minimum of five (5) participants are to be interviewed for the qualitative study.

A unit of analysis refers to the members or elements of the population; the unit of analysis for this study comprised twenty-five (25) storekeepers, thirty-nine (39) stores' attendants and a staff member from line management. However, the selection of the population needs to be suitably aligned with the research questions and plans in terms of understanding and appropriate responses as was observed by (Welman and Kruger 2001; Tight, 2017).

Sampling refers to those selected to be a sample that is representative of a population given that it is often impractical to conduct research on large populations.

Additionally, sampling is a fundamental process in almost any research study, to mitigate the tedious task of studying every element or subject of the entire population (Welman and Kruger, 2001; Polkingham 2005; Tight, 2017). Bougie and Sekaran (2019), define an element as a single member of the population, while a sample is a subset of a population. The sample population consisted of sixty (60) participants that constituted ninety-two percent (92%) of the sampling frame at the eThekweni Electricity stores, which consisted of 65 employees.

Table 3.1 Geographical illustration of eThekwini Electricity stores regions: The sample distribution in the study.

The study population consists of staff members working at the following areas within the eThekwini Electricity region:

<b>Store Name</b>	<b>Job Title: Storekeeper</b>	<b>Job Title: Stores Attendant</b>	<b>Job Title: Other</b>	<b>Male to Female Representation</b>
<b>North Western Depot Stores (Phoenix)</b>	2	3	Nil	2 - 2
<b>Northern Depot Stores (Redhill)</b>	2	3	Nil	4 - 0
<b>Western Depot Stores (Pinetown)</b>	2	2	Nil	1 - 3
<b>Main Stores (Springfield)</b>	8	20	1 Line manager	11 - 18
<b>Cable Yard Stores (Springfield)</b>	2	3	Nil	4 - 1
<b>Meter Stores (Springfield)</b>	1	2	Nil	1 - 2
<b>Transformer Yard (Springfield)</b>	2	2	Nil	3 - 1
<b>Personal and Protective Wear Stores (Springfield)</b>	1	2	Nil	2 - 1

<b>Pole Yard Stores (Springfield)</b>	1	1	Nil	1 - 1
<b>South Western Depot Stores (Chatsworth)</b>	2	2	Nil	3 - 1
<b>Southern Depot Stores (Amanzimtoti)</b>	1	3	Nil	1 - 3
<b>Headquarters: Receiving</b>	1	1	Nil	2 - 0
<b>TOTAL STAFF</b>	25	39	1	<b>65</b>

Table 3.1 above illustrates the geographical distribution of the sample population in the eThekweni Electricity region. The following section addresses the sampling method as applicable to this study.

### **3.5 SAMPLING METHOD AND SAMPLING SIZE**

Cooper and Schindler (2014), highlight the two fundamental sampling methods namely, probability sampling and non-probability sampling. The authors point out that the idea of sampling involves the selection of some elements within a population to generalise conclusions about the entire population. Additionally, the afore mentioned authors advocate the merits of probability sampling, as it eliminates bias and offers the researcher a true cross section of the population to gather data from.

Schindler (2019), describes probability sampling as a type of random sampling that is controlled and assures that each element of the population is afforded a known nonzero chance of selection. It is appropriate since it is a simple and unrestricted method that allows each member of the population to have an equal probability of being selected in the sample.

### **3.5.1 SIMPLE RANDOM SAMPLING**

Simple random sampling is defined as a representative of a population that negates bias and favouritism of one unit of analysis over another, hence the simple random technique is to be adopted in this study. The advantages of simple random sampling include the simplicity of use and each member of the population has an equal chance of being selected. However, this type of sampling requires a listing of population elements and takes more time. Larger sample sizes are normally used which could produce more errors (Welman and Kruger, 2001; Cooper and Schindler, 2014). Bougie and Sekaran (2019), describe simple random sampling as an unrestricted probability sampling design where every element of the population has an equal chance of being chosen, hence this sampling method is most suitable for this study.

### **3.5.2 PURPOSIVE SAMPLING**

A purposive sampling method is a form of non-probability sampling where certain criteria are used to select cases, which is used in this study through semi-structured interview questions to help explain the quantitative results, hence this form of sampling was utilised in this study (Schindler, 2019; Creswell, 2015). Purposive sampling consists further of two broad types of sampling, namely judgement sampling and quota sampling. Judgement sampling is used when participants of a sample are chosen to conform to some criteria of the case, while quota sampling is used generally to improve representative quotas. Bougie and Sekaran (2019), explain that judgement sampling, probably the only significant purposive sampling, is most suitable for this study. However, both types are not easily generalisable. In this study, a group of five (5) interviewees were selected from the Main Stores which is the largest store situated in Springfield within the eThekweni Municipality. The group consists of two (2) stores' attendants, two (2) storekeepers, and a staff member from line management.

## **3.6 MEASURING INSTRUMENT**

Morgeson and Humphrey (2006), reveal the importance of a consolidative and comprehensive work design measure required for a medium between task and attribute measures. Additionally, job characteristics together with social, motivational and work context aspects of work need to be broadened for more detailed outcomes.

### 3.6.1 HACKMAN AND OLDHAM'S JOB DIAGNOSTIC SURVEY (JDS)

The JDS was developed as a measuring instrument that was designed to assess and diagnose jobs prior to redesigning, and the assessments of the effects of the redesign on workers afterwards.

According to Hackman and Oldham (1975), the uses and properties of the JDS are described as follows:

- a) To diagnose jobs with a view to having them redesigned if necessary, so that employee motivation and productivity could be improved.
- b) To assess the effects of job changes on workers, and provide measures for objective job dimensions, individual psychological states, reactions of employees to the job and work setting, and individual growth need strength.

The theory that influenced the development of the JDS was based on three factors, namely core job dimensions, critical psychological states and personal and work outcomes.

Core job dimensions comprise:

- a) Skill variety
- b) Task identity
- c) Task significance
- d) Autonomy
- e) Feedback

Critical psychological states comprise:

- a) *Experienced meaningfulness of the work* – The extent to which an employee views work in terms of being meaningful, beneficial and rewarding.
- b) *Experienced responsibility for work outcomes* – The extent to which an employee feels personally obliged and answerable for the work he or she has completed.

- c) *Knowledge of results* – The extent to which an employee is consistently informed of his effectiveness in carrying out his or her job.

Personal and Work Outcomes comprises of:

- a) *General satisfaction* - An overall measure of the extent to which an employee is satisfied.
- b) *Internal work motivation* - The extent to which an employee is intrinsically motivated to carry out the work, where he experiences positive feelings when the job turns out well and experiences unpleasant feelings when it does not.
- c) *Specific satisfaction* - Separate and specific scales of satisfaction measures that include job security, pay and other remuneration, supervision, peers and colleagues and an opportunity for job development and personal growth.
- d) *Growth need strength* – This is a measure of an employee's desire to attain positive job satisfaction through a job that offers high motivating potential.

A study by Hackman and Oldham (1975), that used the JDS instrument on 658 respondents, across 62 jobs, in 7 organisations displayed substantive validity. The results, in general, show that the measured variables do relate to one another as predicted by the theory on which the instrument was based. It was also found that job dimensions were positively related to measures of work satisfaction and motivation and were generally independent of the two measures of growth need strength which describes a measure of an employee's desire to achieve increased job satisfaction through a job that provides high motivating potential. In terms of the critical psychological states, the measures related strongly to the core job dimensions forecasted by the theory to affect them. Data in this study also suggests that the JDS has satisfactory psychometric characteristics and that the variables it probes, generally relates to forecasted applicable external criteria.

- a) A comprehensive level of motivation and satisfaction of employees on the main job.

- b) The overall motivating potential of current jobs and how definitive aspects of a job add to the achieved motivating potential score.
- c) The willingness of employees to change.

#### Deficiencies in the use of the JDS

- a) Respondents to the JDS must be reasonably literate and recommended to workers with at least a grade eight education. They would also need to read English well.
- b) The JDS instrument is easily copied and is not recommended for the recruitment or hiring of staff.
- c) It is only ideal to use under conditions of anonymity.
- d) The instrument is recommended to diagnose jobs on a group of workers and not individuals.
- e) Standardised data was still being collected on the JDS scales. The instrument was modified for this survey and many respondents used these versions of JDS.

#### **3.6.2 WORK DESIGN QUESTIONNAIRE (WDQ)**

As indicated earlier in this chapter, the WDQ forms an integral part of the conceptual framework of this study. The following section shall describe the WDQ in fine detail and comprehensively explain the dimensions thereof. Morgeson and Humphrey (2006), while pointing to the substantive research and investigation done on work design, acknowledges there are existing measures that are still incomplete. To address this gap, they developed the WDQ, which took over forty years to develop and is regarded as the most comprehensive measure of work design currently available. The WDQ exhibited outstanding reliability and distinct validity, where 540 workers across 243 jobs were sampled and claimed to contribute to at least seven facets of work design. The internal consistency reliability of the WDQ scales is almost uniformly higher, except for the ergonomic factor and is found to be superior to the commonly used JDS. In a study by Moussa, et al. (2017), the WDQ is regarded as the most conceptually consistent and methodologically suited human resources

management work design theory. However, for the WDQ to be applied to the field of knowledge management, it must be expanded and modified to include employee well-being, knowledge sharing and role breadth self-efficacy as central work design mediators and outcomes. Moussa *et al.* (2017) further advance that the WDQ includes the physical aspects of the job by highlighting ergonomics, required physical activities and machinery used in the workplace. The WQD also examines social aspects that include feedback from others, social support and outside communication.

The WDQ comprises four dimensions:

- a) *Task Characteristics* - (Autonomy, task variety, task significance, task identity and feedback from job).
- b) *Knowledge Characteristics*- (Job complexity, information processing, problem solving, skill variety and specialisation).
- c) *Social Characteristics* - (Social Support, Interdependence, Interaction outside organisation and, Feedback from others).
- d) *Work Context* - (Ergonomics, physical demands, work conditions and equipment use).

In terms of an overview of all the theories examined, the WDQ appears to address and encapsulate more characteristics of work design than the others. The inclusion of the work context dimension resonates with the demands and challenges facing employees in a warehousing context. The electricity stores where ergonomics, physical demands, work conditions and equipment use are most apparent were selected in this particular instance.

The elements that make up the four dimensions in the Work Design Questionnaire are listed and described briefly.



### **3.6.2.1      *ELEMENTS OF WORK DESIGN (WDQ)***

*Autonomy* – The degree to which an employee is allowed to use his/her own discretion, judgment and initiative is the freedom and independence of an employee to make decisions relating to his/her work resulting in a sense of ownership and responsibility.

*Task Variety* – The degree to which an employee is involved in a variety or range of tasks within his job

*Task Significance* – The degree of impact an employee's work has on the lives of others and the organisation together with the meaningfulness that is experienced by the employee.

*Task Identity* – The degree to which an employee is allowed to complete a task or job from start to finish, and also relates to his involvement in the work that creates a sense of accomplishment.

*Feedback from job* – The degree to which clear information about the job itself is relayed back to the employee,

*Job complexity* – The degree to which an employee is required to undertake a task with a varying range of complexity.

*Information Processing* – The degree to which an employee is required to analyse, monitor and keep track of information.

*Problem Solving* – The degree to which an employee is required to be creative and innovative in dealing with problems or finding solutions.

*Skill Variety* – The degree to which an employee is required to utilise a variety of skills to carry out the job, and when an employee is given work that requires a variety of skills, he then experiences more meaningfulness in his work.

*Specialisation* – The degree to which an employee is required perform highly specialised jobs or tasks. The employee is required to have a depth of knowledge and expertise.

*Social Support* – The degree to which an employee can develop close friendships and create personal interest at work.

*Interdependence* - The degree to which an employee relies on others to complete their task so that he can complete his. The employee may also be required to complete his task first so that others may complete their tasks.

*Interaction Outside the Organisation* – The degree to which an employee is required to interact with people outside his organisation.

*Feedback from others* – The degree to which an employee receives information about his work from colleagues and management, which encourages him to perform better and realise his full potential. Honest feedback for work done from management promotes job satisfaction and the employee has a better understanding of his level of performance.

*Ergonomics* – The degree to which an employee is comfortable and safe within his physical work environment.

*Physical Demands* – The degree to which an employee is required to use physical effort and muscular endurance.

*Work Conditions* – The degree to which an employee is working in a clean, safe, comfortable and healthy environment.

*Equipment Use* – The degree to which an employee is required to use a variety of equipment, (Morgeson and Humphrey, 2006; Moras, 2021).

Bryman (2016) advance that measurement allows us to benchmark and quantify subtle differences in magnitude and provides the researcher with the basis for more accurate estimates. This study used an adapted questionnaire on work design (WDQ) from Morgeson and Humphrey (2006).

The questionnaire was used to gather the data required for statistical analysis and inferential calculations. Job satisfaction outcomes shall be assessed using these WDQ

dimensions. The WQD is described as an instrument designed to also measure work design and ergonomic dimensions, (Morgeson, Garza and Capion, 2013).

Due to the unprecedented COVID-19 outbreak and the resultant face to face constraints, the questionnaires were to be administered online. Flick (2015), suggests that online surveys could be used through software tools and services that are available on the internet. Online methods of questionnaire dissemination may prove ideal in the current COVID-19 conditions and were therefore used in the study. Advantages of using online survey methods include quick turnaround times for the return of questionnaires, and there would be no need to print or photocopy questionnaires, as online questionnaires would be received via the computer, hence saving costs. However, disadvantages include the possibility of lower response rates, as not all participants may be reachable online. Some participants may also respond more than once and others may fear a breach of their anonymity, hence lack the motivation to respond to the questionnaire.

Due to Covid-19 protocols, the questionnaires were scanned and emailed to all respondents, as Bryman and (2016), suggest that numerous online focus group respondents can be contacted by email. Once the questionnaires were received and completed by the respondents, they were scanned and emailed back to the researcher. Confidentiality and anonymity was achieved by the respondents sending their completed questionnaires directly back to the mailbox of the researcher. Similarly, the face-to-face personal interviews are to be conducted online where possible using Microsoft Teams.

### **3.6.3 DESIGN OF THE QUESTIONNAIRE**

The survey used in this study consisted of closed questions, using a five-point Likert scale that ranged from “very dissatisfied” to “very satisfied”. The WDQ, according to Truxillo, Cadiz, Rineer, Zaniboni and Fraccaroli (2012), provides a comprehensive job design model that encapsulates earlier models of work design and has proven reliability and excellent validity, as demonstrated in previous studies (Morgeson and Humphrey, 2006). The key themes addressed in the questionnaire are:

a) Task characteristics cover autonomy and the initiatives afforded to employees when undertaking given tasks.

- b) Knowledge characteristics entail the understanding and recognition of work done by employees.
- c) Social characteristics describe the interaction of fellow staff members and the impact it has on work outcomes.
- d) Work content mainly addresses the ergonomic aspects of work such as comfort, lighting, ventilation and temperature/humidity of the work environment.

#### **3.6.4 CODING OF THE QUESTIONNAIRE**

Ordinal and nominal scales are to be used to code the data. Bougie and Sekaran (2019) describe coding schemes as a critical part of structured observation and propose predetermined classifications for recording observations. The data collected from the questionnaires would be employed for statistical analysis and inferential calculations of the independent and dependent variables.

#### **3.6.5 ADVANTAGES OF STRUCTURED QUESTIONNAIRE FOR THIS STUDY**

Electronic questionnaires are useful and a relatively cheap method of collecting data, especially when respondents are geographically dispersed. However, the response rate for this type of data collection is usually low, and there is no certainty that the actual respondent has indeed responded or not (Bougie and Sekaran, 2019). As explained earlier that given COVID-19 protocols, the online interview remains most practical. There would be continuous follow up by email to encourage respondents to complete the questionnaires in this study.

#### **3.6.6 INFORMATION ADDRESSED TO RESPONDENTS: COVERING/PARTICIPATION LETTER**

The covering/participation letter (Annexure D) encapsulated the aim and significance of the study, and their valued participation in the study was also emphasised. Confidentiality of information and anonymity was also explained and guaranteed as part of their role in the study.

### **3.7 QUALITATIVE APPROACH**

As part of a mixed methods research approach, a second instrument will be used in the form of a semi-structured interview session with some participants from the sample population; the aim of such an approach is to obtain the individual views and experiences of the participants.

Creswell (2014), suggests that at least five participants are to be selected as part of a qualitative research method to obtain sufficient information pertaining to the study. In this study, while ten (10) employees were nominated to be interviewed, the minimum acceptable response rate will be set at five (5) respondents. The five employees selected comprise two (2) stores' attendants, two (2) storekeepers and one (1) stores' controller (part of line management) from eThekweni Electricity stores. The interviews were to be conducted in English, and audio recorded for post-interview transcript purposes.

The interviews will take 30 minutes per participant, and the information gathered from such would contribute greatly towards helping the researcher get a better understanding of work design and the impact on job satisfaction at eThekweni Electricity stores. The textual information gathered from the interviews shall be transcribed and clustered into themes.

### **3.8 VALIDITY AND RELIABILITY**

Given the nature of this study which embodies both quantitative and qualitative approaches, the important principles of reliability and validity are addressed in a number of ways. The value of using the mixed methods approach is the result of converging lines of inquiry that is the effective triangulation of information.

#### **3.8.1 VALIDITY**

Creswell (2014), defines validity as using certain procedures to check for the accuracy of findings. Kumar (2018), posits that validity is ensured when the measuring instruments used in the study can measure what is required to be measured. The measuring instrument (WDQ) used in this study has proven validity (Morgeson and Humphrey, 2006). The results of the study must also compare favourably with other similar studies to confirm validity.

Bryman (2016), suggest that validity is one of the more important criteria in research and involves the integrity of the research content. The different types of validity include; measurement validity, also known as construct validity, is commonly used in quantitative research, that seeks to measure scientific and social concepts; internal validity involves mainly the aspect of causality and whether conclusions relating to two or more variables are binding; external validity examines the possibility of whether a study could be generalised beyond the context of a specific study, and ecological validity relates to whether the results of social studies are relevant and appropriate to natural social settings.

Validity and reliability matters were addressed through the pilot study. Pilot testing is the preliminary process whereby the research design for the proposed research study is examined, and then it is tested to gain information that could improve the main study. The questionnaires and interviews for this study were pilot tested. Bougie and Sekaran (2019), express the importance of pre-testing instruments such as a questionnaire, to evaluate if the respondents would fully comprehend and understand the questions and wording. This process helps eliminate any inadequacies that the instrument may have and reduces bias.

Pre-testing was done on a small group from the supply chain management department within eThekweni Electricity and excluded any staff member from stores. The group consisted of ten (10) members from diverse groups and had an equal gender representation. The feedback received from the group was used to re-vamp and enhance the questionnaire.

The questionnaire survey was piloted to ten (10) employees from diverse groups at eThekweni Electricity who were not part of the study. Similarly, the semi-structured interview questions were pilot tested on three (3) procurement officers from different divisions in supply management.

### **3.8.2 RELIABILITY**

Morgeson and Humphrey (2006), state that the WDQ chosen for this study has proven reliability. According to Yin (2011), reliability is the repeatability and consistency of research procedures that are used in a study. Schindler (2019), describes reliability as the extent to which a measurement is consistent and free of random or inconsistent

errors. Moreover, the author states that reliable instruments are vigorous and can be used with confidence in different situations and at different times.

The rating and measurement scales contained in the questionnaire ensured the reliability of the data. The data is to be tested for reliability and validity using the Cronbach's alpha coefficient. According to the Institute for Digital Research and Education, the Cronbach Alpha coefficient is used to assess internal consistency reliability.

### **3.9 DATA ANALYSIS**

Data analysis is a crucial step in any project, where coding of data and categorisation is followed by statistical analysis in quantitative research, while in qualitative research the researcher gathers data by directly asking open-ended questions and observing the participants using tools such as focus groups and interviews. The researcher then uses the collected data and conducts a thematic analysis to arrive at a narrative or story (Flick, 2015; Creswell, 2015).

#### **3.9.1 DATA ANALYSIS FOR QUANTITATIVE RESEARCH**

Creswell (2014), defines the quantitative approach as one in which the researcher employs methods of inquiry such as analysis and studies and gathers data on established instruments that produce statistical data, using post-positivist claims for advancing knowledge. The raw data for this study from the questionnaire will be analysed using SPSS software, with analysis containing both descriptive and inferential statistics, to determine the causal effect of work design on job satisfaction.

#### **3.9.2 DATA ANALYSIS FOR QUALITATIVE RESEARCH**

Yin (2011), describes the qualitative approach as becoming more acceptable in mainstream research and enables the use of detailed studies on a wider spectrum of topics. The semi-structured interview sessions provided the data for qualitative research in the form of collated transcripts that would be grouped into themes and analysed further. The analysis would be conducted by gathering the notes, reviewing the data and creating codes, after which themes would then be presented (Male 2016). The results of which will build on the data analysis already compiled during the quantitative approach phase.

### **3.10 DELIMITATIONS/SCOPE**

The study will involve stores' staff employed by eThekweni Municipality (Electricity), within the municipal metropolitan region only. The study is limited to stores within the electricity service unit only. The study may not represent the ethnic or racial demographics proportionally. The study is limited only to local government employees.

### **3.11 LIMITATIONS**

The sample size in this study is relatively narrow. Hence results or findings may not be conclusive, however, given that it contains both qualitative and quantitative approaches, there is a greater opportunity for better triangulated results. The respondents may not respond honestly, due to pressures of conformity. Other work design factors, besides task characteristics, knowledge characteristics, social characteristics and work content, will not be explored, while job satisfaction factors, such as pay, promotion and individual characteristics, will not be explored extensively, as more emphasis will be placed on working conditions.

### **3.12 ANONYMITY AND CONFIDENTIALITY**

Anonymity protects the real identity of the respondents and the study itself. It is important because information of a sensitive nature shared could jeopardise respondents' social standing, benefits or even their jobs as well. Yin (2011) states that participant anonymity or pseudonyms can be used as options. The names of sites and respondents will be kept confidential and coded. According to Wiles, Crow, Heath and Charles (2008), confidentiality is established by the principle of respect for anonymity and is taken to mean that information divulged by someone during the research process cannot be disclosed without consent. Flick (2015), emphasises the need to physically lock away confidential information such as recordings, transcripts and questionnaires in a safe location, so that no one may gain access to it. The researcher will be the sole custodian of all the study information and records, and none of it shall be disclosed in any form.



### **3.13 ETHICAL CONSIDERATIONS**

Schindler (2019), states that the crucial ethical issues relating to experiments are participant anonymity, participant welfare, result confidentiality and research quality. In this study, any harm that may present to the participants both physically and psychologically will be mitigated by providing them with details of the study prior to commencement. Meetings were set up with potential participants to inform them of the topic, possible risks and benefits of the study. Further, strict adherence to anonymity and confidentiality was applied. In particular, the consent form regarding anonymity and confidentiality was signed by the respondents. All data was stored in my personal lock up safe. Finally, all COVID-19 health and safety protocols were adhered to, and all respondents were reminded that they may exit the participation process in the study whenever they wish.

### **3.14 CONCLUSION**

This chapter elucidated the research methodology used in this study. The study adopted the mixed methods approach to implement the research plan in the investigation of work design at eThekweni Electricity stores and its impact on job satisfaction. The research objectives were outlined, and the research design, methods, sampling procedure and research instrument adopted in this study were evaluated in this chapter. The questionnaires were administered online to the participants, and the unstructured interview sessions were conducted as part of the mixed methods approach. The next chapter analyses the results from the data collected that would reflect the job satisfaction indicators based on the work design at eThekweni Electricity stores.

## **CHAPTER FOUR: DATA ANALYSIS AND DISCUSSION**

### **4.1 INTRODUCTION**

This study adopted a mixed-method approach where a questionnaire and structured interviews were used to collect data from employees of the twelve (12) stores within the eThekweni Electricity Department. The questionnaire was completed by sixty participants, and five staff members were interviewed, to provide a more detailed and comprehensive account of their experiences to further augment the quantitative data.

The Statistical Package for Social Sciences (SPSS) version 25.0 was used to analyse the responses gathered from the questionnaires, while thematic analysis was utilised for the information drawn from the structured interviews. Descriptive and inferential analyses were employed as statistical methods for the empirical data sets. The descriptive aspects of the data were illustrated through tables, graphs and figures, while the inferential aspects drew inferences that involved the use of correlations and the one sample t-test values.

### **4.2 THE OVERVIEW**

As pointed out in the preceding chapters, this study adopted a mixed methods approach, hence both quantitative and qualitative data were collected. The questionnaire comprised twenty-six (26) closed-ended questions, while the semi-structured interview consisted of fifteen (15) open-ended questions. The data compiled from the questionnaires and results shall be presented first.

### **4.3 RESPONSE RATE**

The total number of questionnaires disseminated to eThekweni Electricity stores' staff was sixty-five (65). The number of completed questionnaires returned was sixty (60), which equates to a response rate of 92.30%. The response rate could be attributed to a dual method of questionnaire distribution. Some questionnaires were hand-delivered, while others were posted online, especially to those participants located in remote areas in the eThekweni Metropolitan region. While this study is specific to the eThekweni Electrical stores and the results must be largely viewed as case-specific, some of the observations may be generalised to similar work environments.

### 4.3.1 RELIABILITY

Bougie and Sekaran (2019), refer to reliability as the consistency by which observation of an event would yield identical results even on separate occasions. To augment the reliability of this study, the measuring instruments were pilot tested. Additionally, Cronbach's Alpha was used to measure the extent to which a set of variables match. The results are illustrated below in Table 4.1.

Table 4.1 Reliability statistics

Factor	Construct	Items	Percentage variance extracted	Cronbach's alpha
1	Work conditions	19; 21-25	36.18	.930
2	Autonomy	1-4	12.69	.703
3	Job complexity	6; 7; 9; 15	9.66	.669
4	Social interaction	17; 18	8.30	.708

The scores indicated in Table 4.1 correlate favourably with Cronbach's Alpha value of 0.70 except for factor three which fell just below 0.7. Hence these scores indicate an acceptable level of reliability.

## 4.4 STATISTICAL ANALYSIS

### Test – one-sample t-test.

The average satisfaction score is tested against the central score of 3. If the result is significant, interpret it as significant satisfaction if the mean score is >3, and significant dissatisfaction if the mean score is <3. The one sample t-test was conducted using the questionnaire that was adapted from the Work Design Questionnaire (Morgeson and Humphrey 2006), which constituted four dimensions namely, task characteristics, knowledge characteristics, social characteristics and work context. The elements/constructs chosen from these dimensions for the one sample t-test are:

- a) Work conditions (WC)
- b) Autonomy (AUT)
- c) Job complexity (JC)
- d) Social interaction (SI)

Table 4.2 One-sample t-test

Construct	n	Mean (SD)	t	df	p-value
Work conditions	60	2.80 (1.047)	-1.460	59	.150
Autonomy	60	3.8667	11.660	59	<.001*
Job complexity	60	3.8250	10.456	59	<.001*
Social interaction	60	3.5083	5.131	59	<.001*

\* indicates significance at 95% level

#### 4.4.1 BRIEF SUMMARY OF THE STATISTICS

Results in Table 4.2 indicate autonomy, job complexity and social interaction mean scores of >3 hence demonstrating significant satisfaction for those elements. While the element of work conditions revealed a score of 2.8028 (<3), which would correspond to significant dissatisfaction. These findings are corroborated in Table 4.2 where the one sample test highlights a t-value of -1.460 for the element of work conditions with a mean difference of -.19722. In conclusion, Table 4.2 points out that elements of autonomy, job complexity and social interaction reflect a significance level of 95% with p-value scores of <.001 apiece, while the work conditions element does not.

#### 4.4.2 KAISER-MEYER-OLKIN MEASURE AND BARTLETT'S TEST

Factor analysis with Promax rotation was applied to the 25 items measuring satisfaction in different aspects of the job. A Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) value of .793 and a significant Bartlett's test indicates that successful

and reliable factor extraction has taken place. Four factors were extracted which account for 66.82% of the variance in the data. Rotation converged in 5 iterations.

## 4.5 QUANTITATIVE RESULTS AND ANALYSIS

The questionnaire was divided into two (2) sections as indicated below:

Appendix A: Biographical Information

Appendix B: Work Design Questionnaire (Task Characteristics, Knowledge Characteristics, Social Characteristics and Work Context)

### 4.5.1 BIOGRAPHICAL INFORMATION OF PARTICIPANTS

Biographical information regarding the participants was drawn from seven (7) demographic factors. These factors include gender, age, tenure, qualification, marital status, salary and disability status.

#### 4.5.1.1 *GENDER*

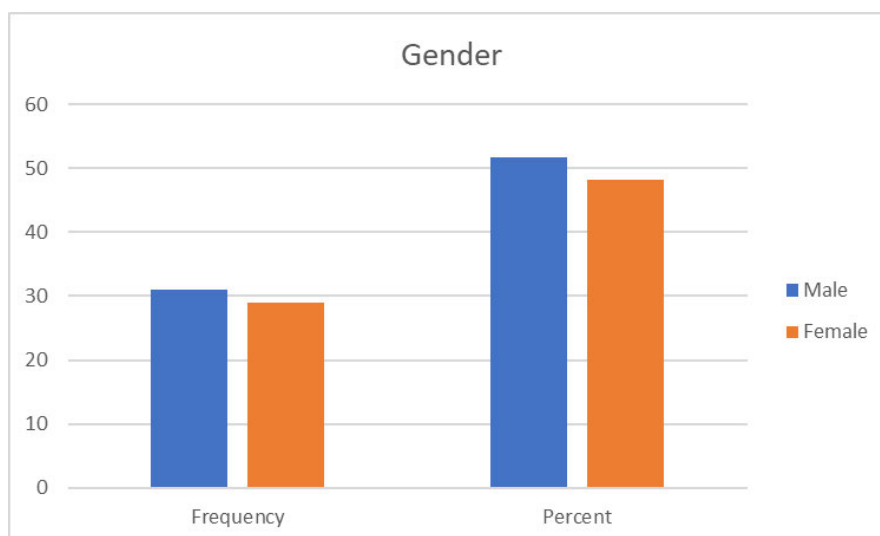


Figure 4.1 Gender

The gender representation between males and females in the study (Figure 4.1) reveals that males constitute 51.7%, while females make up 48.3% of the total participants. This suggests a reasonable balance between males and females working in the stores division, however, in terms of the overall demographic representation in terms of the Employment Equity policy targets at eThekweni Municipality, females are

underrepresented. However, due to the heavy loads and highly intensive manual work associated with the stores' working environment, males were historically favoured for employment as compared to females.

#### **4.5.1.2 AGE**

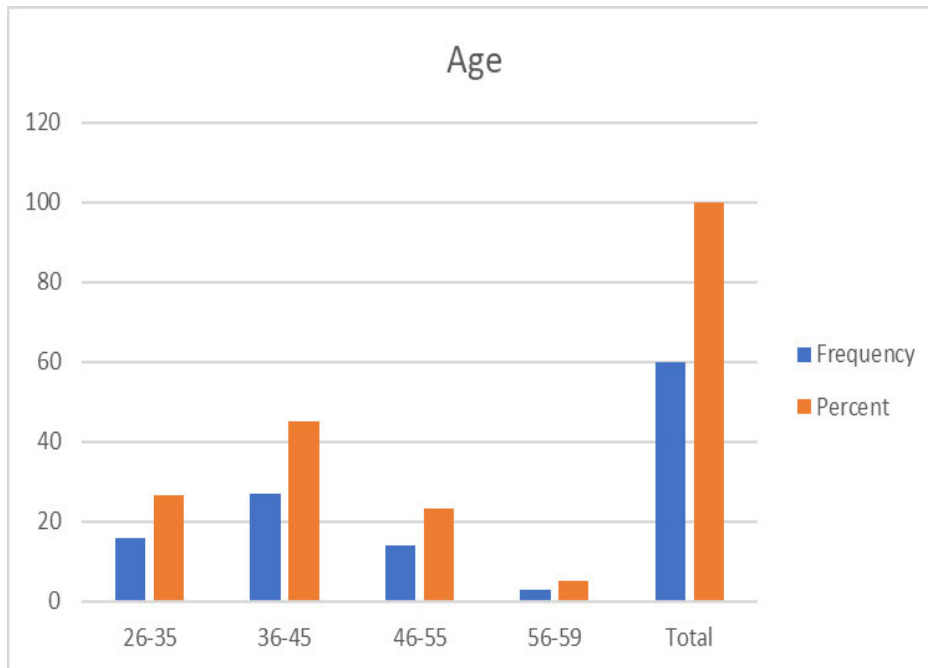


Figure 4.2 Age

The age representation of the participants in this study is illustrated in Figure 4.2. The age group of 56 to 59 represents the smallest cluster of participants of stores' staff at approximately 5% and these staff members are approaching retirement. The age group of 36 to 45 represents the largest cluster of participants at 45%. The usefulness of this finding is that the majority of stores' staff, may be seen as having reasonable work experience relative to their age as well as being young enough to undertake the strenuous tasks demanded in a busy heavy duty electrical stores' environment.

#### 4.5.1.3 *TENURE (YEARS OF WORK EXPERIENCE)*

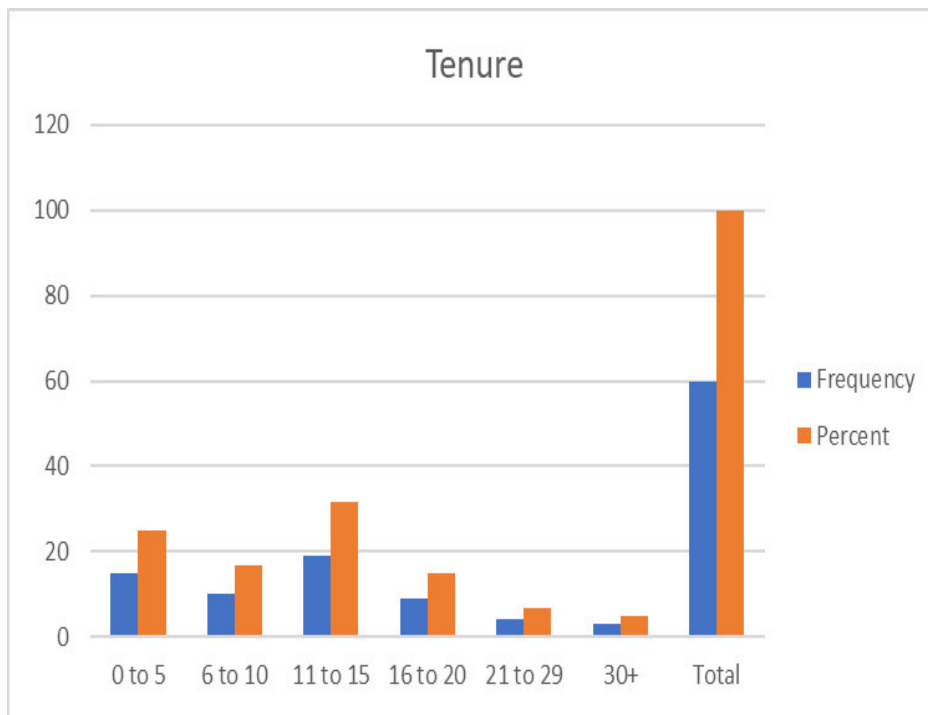


Figure 4.3 Tenure (Years of Work Experience)

The above graph in Figure 4.3 indicates a general wealth of work experience. Thirty-five (35) respondents represent 58.3% who have at least 11 years' work experience, with the lengthiest work experience exceeding 30 years. This finding is noteworthy as it can be assumed that the feedback received for this study may hold added value and integrity. Figure 4.3 also reveals that 25% of participants have working experience of just five years and below. This was due to the recent recruitment of stores' attendants that was outstanding for at least 5 years.



#### **4.5.1.4 EDUCATIONAL QUALIFICATION**

Table 4.3 Educational Qualification

	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
<b>Secondary</b>	8	13.3	13.3	13.3
<b>Matric</b>	42	70.0	70.0	83.3
<b>Diploma/ degree</b>	7	11.7	11.7	95.0
<b>Honours/ BTech</b>	1	1.7	1.7	96.7
<b>Other</b>	2	3.3	3.3	100.0
<b>Total</b>	60	100.0	100.0	

Table 4.3 above indicates that 70% of respondents have a matric pass, while 13.3% have only secondary education. The minimum entry qualification for employment at eThekweni Electricity Stores Division is grade 10, however, matric is preferable. Only the two (2) respondents with qualifications indicating 'other' have post matric certificates. Table 4.3 also reveals that one respondent is an undergraduate at the Honours/BTech level, while seven respondents have a diploma or degree in Inventory Management or Supply Chain Management.



#### 4.5.1.5 4.5.1.5 MARITAL STATUS

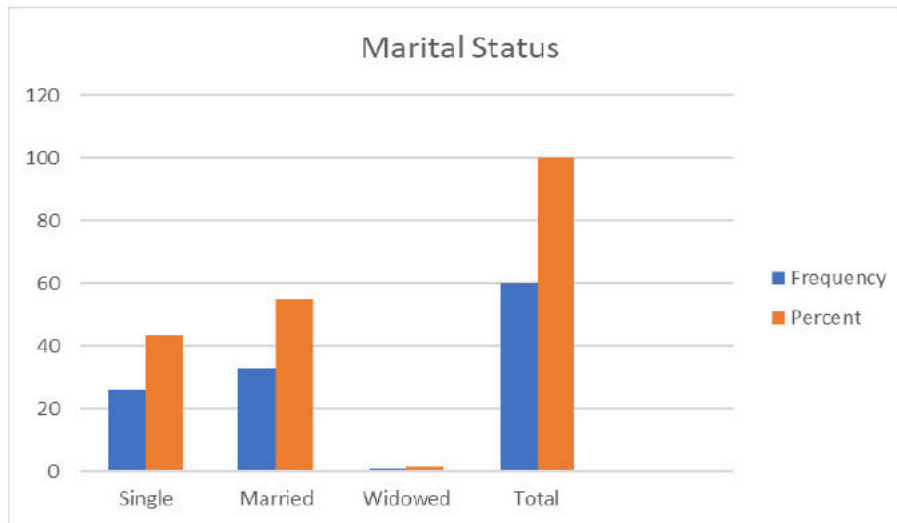


Figure 4.4 Marital Status

The marital status representation in Figure 4.4 above indicates that just 1 respondent is widowed, while 55% of respondents are married and 43.3% are single.

#### 4.5.1.6 SALARY

Table 4.4 Salary distribution of the respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>R5001 - R8000</b>	2	3.3	3.3	3.3
<b>R8001 - R10000</b>	14	23.3	23.3	26.7
<b>R10001 - R14999</b>	29	48.3	48.3	75.0
<b>R15000+</b>	15	25.0	25.0	100.0
<b>Total</b>	60	100.0	100.0	

The salary distribution of the respondents is illustrated in Table 4.4 above. The majority of respondents (48.3%) earn a salary in the R10001 – R14999 bracket, while 25% of respondents earn in the R 15000+ bracket. The stores' attendants earn salaries in the R5001 – R8000 and R 8001 – R10 000 brackets. The storekeepers/supervisors earn salaries in the R10001 – R14999 and R15000+ brackets.

#### **4.5.1.7      *DISABILITY STATUS***

Table 4.5 Disability Distribution

	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative percent</b>
<b>Yes</b>	1	1.7	1.7	1.7
<b>No</b>	59	98.3	98.3	100.0
<b>Total</b>	60	100.0	100.0	

The disability distribution of respondents in Table 4.5 is understandably on the lower side given the nature and overall size of the eThekweni Municipality where people with disabilities are generally underrepresented. This was highlighted in a report dated 2019-08-01 for eThekweni Municipality where people with disabilities were underrepresented with 74 out of 224 employees (33.03%) in the same task grade. Table 4.5 illustrates just 1 respondent out of 60 (1.7%) who is a disabled employee. While this representation is a poor reflection on eThekweni Municipality from a recruitment perspective, more emphasis ought to be placed on hiring people with disabilities, in terms of the Employment Equity Act and the Transformation Recruitment Report.

## 4.6 QUANTITATIVE STUDY RESULTS

The first dimension discussed in line with the WQD, is Task Characteristics. The elements that comprise task characteristics are autonomy and task variety. These elements are tested via six statements. The following two statements (TC1 and TC2) relate to the Work Scheduling Autonomy element of the task characteristics dimension.

Table 4.6 TC1 The job allows me to plan how I perform my duties

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>Very dissatisfied</b>	1	1.7	1.7	1.7
<b>Dissatisfied</b>	1	1.7	1.7	3.3
<b>Neutral</b>	16	26.7	26.7	30.0
<b>Satisfied</b>	26	43.3	43.3	73.3
<b>Very satisfied</b>	16	26.7	26.7	100.0
<b>Total</b>	60	100.0	100.0	

Table 4.6 points to 43.3 percent of respondents as being satisfied with their freedom to plan in respect of how they would carry out their duties, while 26.7% were very satisfied. Overall, this is a positive result which points to staff having the necessary autonomy to use a much broader set of skills and knowledge, however, there remains 26.7 percent of respondents who are ambivalent as to whether they have been given latitude to plan and execute their responsibilities within the broader operational framework of the unit. It is also noted that more females than males were satisfied with the latitude permitted to plan their jobs. Much additional attention could be paid to these employees to ensure the full utilisation of all their skills and knowledge.

Table 4.7 TC2 My job allows me to decide on how to schedule my work

		Frequency	Percent	Valid Percent	Cumulative Percent
	<b>Neutral</b>	14	23.3	23.3	23.3
	<b>Satisfied</b>	34	56.7	56.7	80.0
	<b>Very satisfied</b>	12	20.0	20.0	100.0
	<b>Total</b>	60	100.0	100.0	

The results as indicated in Table 4.7 reflect a very high satisfaction rate with satisfied respondents representing 56.7% and very satisfied respondents 20%. The overall satisfaction rate stood at 76.7%. The respondents who were neutral stood at 23.3 percent. This finding is quite significant as it augurs well for the business unit when staff are satisfied that they may exercise the necessary responsibility to plan and carry out their own tasks within broader unit performance standards. There are however still a sizeable group of staff members who must be assisted to also feel that they too have opportunities to exercise such responsibility of scheduling and carrying out their work rather than being directed by a supervisor for each work activity.



Table 4.8 TC3 The job gives me a chance to make decisions on my own

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>Dissatisfied</b>	1	1.7	1.7	1.7
<b>Neutral</b>	19	31.7	31.7	33.3
<b>Satisfied</b>	28	46.7	46.7	80.0
<b>Very satisfied</b>	12	20.0	20.0	100.0
<b>Total</b>	60	100.0	100.0	

The overall response in table 4.8 shows the majority of respondents (46.7 %) were satisfied with being given a chance to make their own decisions regarding their job. A further 20% were very satisfied with this aspect of the job. However, 31.7% of the respondents remained ambivalent in respect of decision making. There is a close correlation between the results of the respondents being either satisfied or very satisfied in respect of enjoying decision-making autonomy and deciding on the scheduling of their work. Given the positive satisfaction level already in existence, this element needs to be enhanced with those employees who are uncertain as to whether they are really given such responsibility and hence may require further investigation.

The following statement deals with the Work Methods Autonomy element of the job.

Table 4.9 TC4 The job gives me a chance to decide what methods to use in my work.

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>Dissatisfied</b>	2	3.3	3.3	3.3
<b>Neutral</b>	26	43.3	43.3	46.7
<b>Satisfied</b>	18	30.0	30.0	76.7
<b>Very satisfied</b>	14	23.3	23.3	100.0
<b>Total</b>	60	100.0	100.0	

The results displayed in Table 4.9 point to great ambivalence in respect of whether the respondents saw their job as giving them the opportunity to decide on what methods to use in carrying out their duties. This is evidenced by 43.3% of the respondents indicating a neutral bias. However, respondents who were satisfied made up 30 percent, while some were very satisfied with a 23.3% result. While the overall satisfaction level is positive, there remains a large group of employees who are not sure that such flexibility exists in respect of “work methods autonomy”. As a norm, certain units within a business may clearly have defined methods because they may have been based on tried and tested principles, for example, just in time technology in supply chain management. Younger staff (26-35 years) were found to be more satisfied than older staff (46-55 years) in seeing that they are given a chance to decide on the methods to employ in their duties.

The following two statements (TC5 and TC6) involve the Task Variety element of the job.

Table 4.10 TC5 My job requires me to do different things

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>Dissatisfied</b>	3	5.0	5.0	5.0
<b>Neutral</b>	16	26.7	26.7	31.7
<b>Satisfied</b>	24	40.0	40.0	71.7
<b>Very satisfied</b>	17	28.3	28.3	100.0
<b>Total</b>	60	100.0	100.0	

Different levels of satisfaction are prominent in Table 4.10 where satisfied respondents constitute the highest satisfaction rate at 40%, and very satisfied respondents stood at 28.3%. Neutral respondents stood at 26.7%, and dissatisfied respondents at just 5%. Females were found to be more satisfied with performing different tasks than males. The findings on this aspect of the job reveal an overall satisfaction bias at 68.3%, which may indicate an appreciation by respondents to explore and attempt various job activities within the stores' unit. Further, it does point to a greater ability to develop the entire team to have full knowledge of all the tasks that are performed within the unit. This, as well as the continuous rotation of staff, tends to help with future succession planning and helps keep staff spirits and enthusiasm for their jobs at a positive level.



Table 4.11 TC6 The job requires doing a wide range of tasks

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>Dissatisfied</b>	4	6.7	6.7	6.7
<b>Neutral</b>	17	28.3	28.3	35.0
<b>Satisfied</b>	25	41.7	41.7	76.7
<b>Very satisfied</b>	14	23.3	23.3	100.0
<b>Total</b>	60	100.0	100.0	

The results in Table 4.11 closely resonate with the results found in Table 4.12. Neutral respondents account for 28.3%, while satisfied respondents constitute 41.7% and very satisfied respondents make up 23.3% of the responses. The respondents who were dissatisfied constituted a relatively small percentage of 6.7. Younger staff (26-35 years), specifically females were found to be far more content with performing a wide array of tasks than the older staff (46-55 years) and male counterparts. The findings indicate a strong correlation between these two tested variables.

The next dimension focusses on knowledge characteristics, of which the elements are job complexity, information processing and problem solving.



#### 4.6.1 KNOWLEDGE CHARACTERISTICS

The following two statements (KC7 and KC8) relate to the complexity element of the job.

Table 4.12 KC7 My job requires that I perform one task at a time

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>Dissatisfied</b>	1	1.7	1.7	1.7
<b>Neutral</b>	19	31.7	31.7	33.3
<b>Satisfied</b>	23	38.3	38.3	71.7
<b>Very satisfied</b>	17	28.3	28.3	100.0
<b>Total</b>	60	100.0	100.0	

Table 4.12 illustrates a relatively high neutral response (31.7%). However, satisfied respondents constitute the highest percentage at 38.7. Respondents who were very satisfied accounted for 28.3% of the feedback. Older staff (46-55) years and (56-59) years and more specifically males were found to be more satisfied than the younger staff (26-35 years) with respect to undertaking one task at a time. The results seem to point out that most respondents have a favourable propensity towards performing one task at a time, this does not necessarily point out that they would not be easily satisfied should they be required to multi-task or take on two or more activities almost at the same time. Given the unique nature of the stores, generally one could speculate that when drawing from a stock bin or stock stacks, it requires one action at a time irrespective of what quantities of similar or dissimilar materials are required. However, a huge proportion (31.7%) of respondents remain ambivalent about whether they do one task at a time, or under the apprehension that if they are drawing more than one stock item, it constitutes a number of tasks which has the propensity to leave them in

a state of not being satisfied nor dissatisfied. This ideally is an opportunity for further investigation.

Table 4.13 KC8 The job involves doing relatively simple tasks.

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>Neutral</b>	17	28.3	28.3	28.3
<b>Satisfied</b>	30	50.0	50.0	78.3
<b>Very satisfied</b>	13	21.7	21.7	100.0
<b>Total</b>	60	100.0	100.0	

The results as depicted in Table 4.13 point to a 50% satisfaction rate. Respondents who were neutral constituted 28.3% while 21.7% were very satisfied with undertaking relatively simple tasks. This finding may allow one to conclude that respondents do enjoy simplistic or simplified processes with regard to work, and statement KC8 correlates strongly with statement KC7 in terms of satisfaction. It would appear that respondents are quite satisfied with carrying out simple tasks, one at a time. However, it may be necessary to pay attention to staff who were not sure about undertaking relatively simple tasks, as these respondents do not view their jobs as comprising rather simple work tasks, thus diminishing the relative importance of their jobs.

The following two statements (KC9 and KC10) relate to the element of information processing.

Table 4.14 KC9 My job requires that I monitor a large amount of information

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>Dissatisfied</b>	4	6.7	6.7	6.7
<b>Neutral</b>	16	26.7	26.7	33.3
<b>Satisfied</b>	28	46.7	46.7	80.0
<b>Very satisfied</b>	12	20.0	20.0	100.0
<b>Total</b>	60	100.0	100.0	

Table 4.14 indicates an overall satisfaction rate of 66.7%, with 46.7% of respondents being satisfied with the monitoring of large amounts of information, while 20% of them were very satisfied. Respondents who were neutral about this aspect of the job stood at 26.7%. It is also noted that staff with longer working years (16-20), were more satisfied with monitoring large amounts of information than staff with shorter years of working (0-5). The findings suggest that most respondents were well adapted to their jobs of managing and processing high levels of information which is traditionally the hallmark of large stores that dispense material and goods on a constant basis. There remains 26.7% of respondents who are uncertain as far as whether they do monitor and process large amounts of stock information. It remains important that all staff who work in busy stores' environment are well trained and attuned to the processing and the physical storage of stores stock given that many financial resources are tied up in this business activity.



Table 4.15 KC10 The job involves a great deal of information analysis

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>Dissatisfied</b>	6	10.0	10.0	10.0
<b>Neutral</b>	18	30.0	30.0	40.0
<b>Satisfied</b>	23	38.3	38.3	78.3
<b>Very satisfied</b>	13	21.7	21.7	100.0
<b>Total</b>	60	100.0	100.0	

The information in Table 4.15 illustrates that the majority (38.3%) of the respondents were satisfied and 21.7% very satisfied respondents. However, the number of respondents who are neutral is interestingly high (30%), while only 10% were dissatisfied. This finding may suggest a lack of understanding in terms of work processes and execution or uncertainty regarding standard operating procedures. Statement KC9 and KC10 seem to correlate significantly, and both sets of data seem to support each other. The problem-solving aspect of the job is examined through the “creativity element within a job” and “the job allows for unique ideas and solutions to be advanced as part of problem solving”. These elements when present in a job tend to increase overall job satisfaction.

The following two statements (KC11) and (KC12) relate to the problem-solving aspect of the job.

Table 4.16 KC11 The job requires that I be creative.

		Frequency	Percent	Valid Percent	Cumulative Percent
	<b>Dissatisfied</b>	2	3.3	3.3	3.3
	<b>Neutral</b>	22	36.7	36.7	40.0
	<b>Satisfied</b>	21	35.0	35.0	75.0
	<b>Very satisfied</b>	15	25.0	25.0	100.0
	<b>Total</b>	60	100.0	100.0	

Overall, the satisfied respondents in table 4.16 stood at 60%, thus indicating that the majority of staff held the view that their jobs gave them sufficient opportunity to be creative within their sphere of work. Younger staff (26-35 years) expressed more satisfaction than the older staff (46-55) and (56-59) years. Nonetheless, it may be important that attention be paid to those respondents who are approximately 36 percent, and they may largely see their jobs in the stores as being mainly repetitive and given very little opportunity for creativity.

Table 4.17 KC12 My job requires that I create unique ideas and solutions to problems

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>Dissatisfied</b>	6	10.0	10.0	10.0
<b>Neutral</b>	11	18.3	18.3	28.3
<b>Satisfied</b>	26	43.3	43.3	71.7
<b>Very satisfied</b>	17	28.3	28.3	100.0
<b>Total</b>	60	100.0	100.0	

Table 4.17 indicates an overall satisfaction rate of 71.6%. The findings in Table 4.16 point to the respondents being uncertain in terms of being creative, but in Table 4.17, the respondents seem quite willing to contribute unique ideas and solutions to problems. Younger staff (26-35 years) expressed more satisfaction in being creative and contributing solutions to problems than the older staff (46-55 years).

#### 4.6.2 SOCIAL CHARACTERISTICS

The next section covers the Social Characteristics dimension, of which the elements are made of social support, interdependence and interaction outside the organisation. Social characteristics largely involve the emotional and psychological aspects of staff, where bonding with colleagues and interaction with customers play an important role in motivation and job satisfaction. This in turn may contribute to a more positive working environment that could enhance teamwork and productivity.

The next two statements (SC13) and (SC14) relate to the element of Social Support.

Table 4.18 SC13 I have opportunities to develop close friendships in my job

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>Dissatisfied</b>	3	5.0	5.0	5.0
<b>Neutral</b>	20	33.3	33.3	38.3
<b>Satisfied</b>	24	40.0	40.0	78.3
<b>Very satisfied</b>	13	21.7	21.7	100.0
<b>Total</b>	60	100.0	100.0	

A very positive satisfaction rate (40%) is revealed in Table 4.18, while 21.7% of respondents indicated a very satisfied outcome. However, 33.3% of the respondents remained ambivalent as to whether the work arena provides opportunities for one to build close relations with work colleagues. Females and younger staff (26-35 years) were found to be more satisfied with opportunities at work to develop close friendships. Given the nature of the working environment, there are much greater opportunities for the respondents to develop close friendships at work. This may also suggest stronger working relationships amongst employees that could contribute toward positive teamwork and productivity.



Table 4.19 SC14 The people I work with take a personal interest in me

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>Dissatisfied</b>	2	3.3	3.3	3.3
<b>Neutral</b>	23	38.3	38.3	41.7
<b>Satisfied</b>	22	36.7	36.7	78.3
<b>Very satisfied</b>	13	21.7	21.7	100.0
<b>Total</b>	60	100.0	100.0	

The results displayed in Table 4.19 illustrate a relatively close response rate between the neutral respondents (38.3%), and the satisfied respondents (36.7%) however, the overall satisfaction rate is at 68%, hence pointing to a collegial working environment, which allows for friendships to develop at work. This may have resulted in fellow employees taking personal interests in each other as their bonds strengthened. As indicated in statement SC13, this may prove positive in terms of teamwork and productivity.

Teamwork and workflow interdependence is an important contributor to more satisfied staff in a workplace. These elements are reported as follows:



Table 4.20 SC15 Other jobs depend directly on my output

		Frequency	Percent	Valid Percent	Cumulative Percent
	<b>Dissatisfied</b>	5	8.3	8.3	8.3
	<b>Neutral</b>	19	31.7	31.7	40.0
	<b>Satisfied</b>	22	36.7	36.7	76.7
	<b>Very satisfied</b>	14	23.3	23.3	100.0
	<b>Total</b>	60	100.0	100.0	

The majority of the respondents in Table 4.20 above indicate an overall satisfaction rate of 60% in respect of interdependence of work within the team. 31.7% of respondents are ambivalent in respect of their work within a team and especially as it relates to the flow of tasks from one job to another. This may indicate a lack of work skills, poor supervision or inadequate training. The findings indicate that most respondents had an overall satisfaction rate of 60% which suggests that they feel comfortable and competent about the quality of their output as well as functioning within a group to reach a successful output.

Table 4.21 SC16 I cannot complete my job unless others do their work.

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>Very dissatisfied</b>	1	1.7	1.7	1.7
<b>Dissatisfied</b>	1	1.7	1.7	3.3
<b>Neutral</b>	19	31.7	31.7	35.0
<b>Satisfied</b>	26	43.3	43.3	78.3
<b>Very satisfied</b>	13	21.7	21.7	100.0
<b>Total</b>	60	100.0	100.0	

Very closely related to Table 4.21, is the results contained in Table 4.20 where interdependency of workflow is examined. In this respect the results in Table 4.21 points to a high level of overall satisfaction of the respondents when working in teams knowing full well that each person's output feeds into the next person's job and performance. The findings suggest that both statements (SC15 and SC16) portray similarities, and the interdependence factors overall are being positive. However, approximately one third of respondents remain ambivalent in respect of whether they can work independent of others in the team or they are significantly dependent on others to perform their tasks

The next element relates to the element of Interaction Outside the Organisation.

Table 4.22 SC17 The job involves much interaction with people outside my work

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>Dissatisfied</b>	5	8.3	8.3	8.3
<b>Neutral</b>	26	43.3	43.3	51.7
<b>Satisfied</b>	20	33.3	33.3	85.0
<b>Very satisfied</b>	9	15.0	15.0	100.0
<b>Total</b>	60	100.0	100.0	

The results in table (4.22) indicate the majority of respondents (43.3%) tend to reflect a level of uncertainty as to whether their jobs do have reasonable levels of interaction with people outside. This may also demonstrate a lack of understanding of who their immediate clients are. Given that the role of the selected department for this study is electrical stores, virtually every employee would have some degree of interaction with all the other departments that draw up the stores for their work activities. Older staff (46-55 years) and (56-59 years) were more satisfied with their interaction with people outside of work compared to younger staff (26-35 years). Although the respondents were generally satisfied in terms of the job interaction with people outside of their immediate work environment, the findings do suggest that not all employees interact with people outside their work arena. However, the overall satisfaction rate satisfied, (33.3%) and very satisfied, (15%) would indicate that 48.3% of respondents were pleased with their jobs in terms of interacting with people outside their work environment which includes all their customers.



Table 4.23 SC18 My job requires that I spend much time with people outside my work

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>Very dissatisfied</b>	1	1.7	1.7	1.7
<b>Dissatisfied</b>	5	8.3	8.3	10.0
<b>Neutral</b>	27	45.0	45.0	55.0
<b>Satisfied</b>	19	31.7	31.7	86.7
<b>Very satisfied</b>	8	13.3	13.3	100.0
<b>Total</b>	60	100.0	100.0	

A high degree of neutral respondents (45%) was noted in Table (4.23). Satisfied respondents accounted for 31.7% of the feedback, while 13.3% of them were very satisfied. Dissatisfied respondents stood at 8.3 percent and very dissatisfied respondents stood at a paltry 1.7%. As highlighted in SC17, older staff (46-55 years) seem to be more satisfied with interacting and spending more time with people outside their work than their younger counterparts (26-35 years). This may suggest that the older staff (46-55 years) have built long-standing relationships with people outside of work such as contractors and external municipal staff over the years. The findings reveal a close correlation with the above statements (SC18 and SC17) where a great degree of ambivalence exists. The findings in SC17 and SC18 would strongly suggest that respondents who had answered “neutral” did not view their jobs as requiring them to have significant face to face interaction with customers or people from outside of their immediate team colleagues because they were often required to work at the back of the warehouse.

The next dimension focusses on work context, of which the elements are ergonomics, physical demands and work conditions.

#### 4.6.3 WORK CONTEXT

The following two statements, WC19 and WC20, deal with the element of ergonomics.

Table 4.24 WC19 The seating arrangements on the job are adequate in terms of comfort and postural support – Ergonomics

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>Very dissatisfied</b>	8	13.3	13.3	13.3
<b>Dissatisfied</b>	15	25.0	25.0	38.3
<b>Neutral</b>	21	35.0	35.0	73.3
<b>Satisfied</b>	11	18.3	18.3	91.7
<b>Very satisfied</b>	5	8.3	8.3	100.0
<b>Total</b>	60	100.0	100.0	

As evident in Table 4.24, there seems to be a greater level of overall dissatisfaction in respect of seating. This is factored taking into account the neutral respondents (35%), as well as those who responded as being in the dissatisfied category (25%). The findings may suggest the following:

Ordinarily, the general worker category would be on their feet most of the day, and they would not be allocated office/desk space and seating. While the satisfied respondents would tend to come from the ranks of the storekeepers with seating and designated working spaces.

Therefore, this particular result is worth examining more carefully from an ergonomic perspective in order to get maximum productivity from staff.

Table 4.25 WC20 The job involves excessive reaching and bending (reverse scored)  
– Ergonomics

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>Very dissatisfied</b>	9	15.0	15.0	15.0
<b>Dissatisfied</b>	18	30.0	30.0	45.0
<b>Neutral</b>	15	25.0	25.0	70.0
<b>Satisfied</b>	13	21.7	21.7	91.7
<b>Very satisfied</b>	5	8.3	8.3	100.0
<b>Total</b>	60	100.0	100.0	

As per Table 4.25, the levels of dissatisfaction overall remain very high in respect of excessive physical work required in the stores. It is noted that older staff (46-55 years) and (56-59 years) were less satisfied than the younger staff (26-35 years) in respect of excessive reaching and bending that the job entails. The findings may suggest the following:

The respondents are not using suitable equipment such as ladders and reach trucks (pallet stackers), or such suitable equipment is not available in modern stores and warehousing facilities. Further that the organisation in question has not embarked upon suitable technology to manage and operate a modern store in keeping with the 4<sup>th</sup> industrial revolution.



The following statement (WC21) involves the element of Physical Demands.

Table 4.26 WC21 The job requires a lot of muscular strength and endurance. – Physical demands

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>Very dissatisfied</b>	8	13.3	13.3	13.3
<b>Dissatisfied</b>	16	26.7	26.7	40.0
<b>Neutral</b>	16	26.7	26.7	66.7
<b>Satisfied</b>	15	25.0	25.0	91.7
<b>Very satisfied</b>	5	8.3	8.3	100.0
<b>Total</b>	60	100.0	100.0	

The results in table 4.26 do suggest an overall satisfaction rate when taking into account the “very dissatisfied, dissatisfied and neutral responses together”. The responses are not surprising as the job requires significant labour-intensive processes to be carried out, especially within the stores. In particular, the attendants are required to constantly be on their feet and haul several pieces of electrical parts, tools and equipment throughout the workday. As also indicated in Table (4.26), older staff (46-55) years and (55-59) years were less satisfied than younger staff (26-35 years) with the rigour and physical demands required to complete tasks. Such results tend to point to a lack of appropriate mechanisation and intensive use of technology in the stores. Hence the continued reliance on labour-intensive processes to operate the stores tends in the long run to result in general tiredness and ultimately dissatisfaction.

The following results cover elements of Work Conditions:

Table 4.27 WC22 My workplace is not very noisy. – Work Conditions

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>Very dissatisfied</b>	6	10.0	10.0	10.0
<b>Dissatisfied</b>	21	35.0	35.0	45.0
<b>Neutral</b>	13	21.7	21.7	66.7
<b>Satisfied</b>	14	23.3	23.3	90.0
<b>Very satisfied</b>	6	10.0	10.0	100.0
<b>Total</b>	60	100.0	100.0	

The overall response in table 4.27 indicates a high level of dissatisfied respondents (35%), and very dissatisfied respondents accounted for 10%, neutral respondents constituted 21.7%. One may conclude from this result that the stores contain a high degree of unpleasantness as well as unreasonable noise levels. This may be attributed to the incessant movement of delivery trucks, forklifts and trolley jacks. The low overall satisfaction rate (33.3%) is quite understandable taking the aforementioned factors into account. The advent of modern technology in areas of stores and manufacturing facilities has certainly minimised several risky physical working conditions that used to be very prevalent in the past. Hence attention needs to be further paid in this respect arising from this study.



Table 4.28 WC23 The climate at work is comfortable in terms of temperature and humidity – Work Conditions

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>Very dissatisfied</b>	12	20.0	20.0	20.0
<b>Dissatisfied</b>	16	26.7	26.7	46.7
<b>Neutral</b>	14	23.3	23.3	70.0
<b>Satisfied</b>	10	16.7	16.7	86.7
<b>Very satisfied</b>	8	13.3	13.3	100.0
<b>Total</b>	60	100.0	100.0	

Dissatisfied respondents constitute the highest level in table 4.28 at 26.7%, while neutral respondents stand at 23.3%. Interestingly, dissatisfied respondents represent 20% of the feedback, while satisfied ones stand at 16.7%. Very satisfied respondents form 13.3% of the results. The findings are quite consistent with all other Work Content elements, where a higher weighting of dissatisfied respondents is more prevalent. The dissatisfied (26.7%) and very dissatisfied respondents (20%) are most likely based at the Springfield Main Stores where the windows are often closed to prevent the dust and sediment from the nearby dump sites and informal dwellings from filtering through. The closed windows would trap in the warm air and prevent the circulation of fresh air. This, in turn, would raise the temperature and humidity levels, especially in summer. The Springfield Main Stores has air conditioning but it is limited to the administration offices. The rest of the warehouse has no air conditioning. The neutral respondents (23.3%) together with the satisfied (16.7%), and very satisfied respondents (13.3%) are most probably based at the depot stores in outlying areas of eThekweni Electricity, where there is better circulation of air and ventilation.

Table 4.29 WC24 The lighting and illumination at work are adequate- Work Conditions

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>Very dissatisfied</b>	10	16.7	16.7	16.7
<b>Dissatisfied</b>	22	36.7	36.7	53.3
<b>Neutral</b>	8	13.3	13.3	66.7
<b>Satisfied</b>	13	21.7	21.7	88.3
<b>Very satisfied</b>	7	11.7	11.7	100.0
<b>Total</b>	60	100.0	100.0	

In Table 4.29, dissatisfied respondents constitute 36.7% of the feedback, while 16.7 percent are very dissatisfied. Interestingly, only 11.7% of the respondents were very satisfied, while 21.7% were satisfied. Older staff (46-55 years 56-59 years) expressed more dissatisfaction than their younger counterparts (26-35 years) in terms of inadequate lighting and illumination at stores. The findings suggest that the lighting and illumination at the work site may not be adequate, as only 21.7% of the respondents were satisfied, and a minuscule 11.7% of them were very satisfied. Previous studies as indicated in this study, revealed that adequate lighting and illumination at work were conducive to promoting worker motivation and psychological health.

Table 4.30 WC25 The job environment is clean and free from dust - Work Conditions

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>Very dissatisfied</b>	10	16.7	16.7	16.7
<b>Dissatisfied</b>	18	30.0	30.0	46.7
<b>Neutral</b>	16	26.7	26.7	73.3
<b>Satisfied</b>	12	20.0	20.0	93.3
<b>Very satisfied</b>	4	6.7	6.7	100.0
<b>Total</b>	60	100.0	100.0	

Table 4.30 indicates more overall dissatisfaction among respondents at 46.7%. Neutral respondents stood at 26.7%, while satisfied respondents represented 20% of the feedback. This finding is not surprising based on the results revealed so far relating to the work content dimension. Most of the dissatisfied respondents are probably based at Springfield Main Stores that is located next to a landfill dump site and informal settlements. Pollutants emanating from these sources contribute greatly to the dust and smoke build-up in the work site. This is a huge concern in terms of the health and safety of workers and the community at large.

The following statement relates to the overall ratings of job satisfaction.



#### 4.6.4 OVERALL JOB SATISFACTION

Table 4.31 JS26 Your overall rating of job satisfaction in terms of work design

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>Very dissatisfied</b>	5	8.3	8.3	8.3
<b>Dissatisfied</b>	20	33.3	33.3	41.7
<b>Neutral</b>	13	21.7	21.7	63.3
<b>Satisfied</b>	16	26.7	26.7	90.0
<b>Very satisfied</b>	6	10.0	10.0	100.0
<b>Total</b>	60	100.0	100.0	

Interestingly in table 4.31, the overall job satisfaction indicates that most respondents were dissatisfied (41.6%). Respondents that were overall satisfied constituted 26.7%. Neutral respondents stood at 21.7%. The findings reveal that of the four dimensions, work context shares an inverse relationship with all the other dimensions such as task characteristics, knowledge characteristics and social characteristics in terms of the number of dissatisfied and satisfied respondents. Overall, feedback from respondents on all work context elements (working conditions) points to a unanimous response of being dissatisfied in contrast to other elements from other dimensions where these respondents mainly responded as being generally satisfied. The work context dimension indicates a significant shift in terms of the working conditions outcomes, hence suggesting that respondents may be experiencing particular challenges in this aspect of their jobs.

## 4.7 SEMI-STRUCTURED INTERVIEWS

In conducting the semi-structured interviews, a list of fifteen (15) questions was put together for discussion with five (5) employees at stores. The participants included a cross section of general workers, storekeepers and senior storekeepers. Participants were required to answer in a limited form of quantitative data in a form of 'Yes' and 'No' at the outset, and then to explain or elaborate on their experiences in terms of the scenario that was presented to them.

Most questions were based on the four dimensions found in WDQ (Morgeson and Humphrey 2015). The primary purpose was to converge the data from the quantitative data with the more exploratory and narrative-based qualitative data gathered in the structured interviews.

The participants are labelled from P1 to P5.

The interviewees were asked if their jobs allow them freedom and flexibility in carrying out their duties. The individual responses are recorded as follows:

*P1. Yes, it does. I can do anything, do my best ability to satisfy customers.*

*P2. Yes, it does. I can talk to colleagues and get ideas and advise on ways to improve things.*

*P3. Yes, it does because the superiors assist in making work easier and can speak to him easily.*

*P4. Yes, I have a lot of flexibility and [I am] very happy with that.*

*P5. Yes, happy.*

An important hallmark of satisfaction in the workplace is the freedom and flexibility of workers in carrying out their duties. Most workers enjoy their job best when they believe that they are valued and form an important ingredient towards being trusted and valued by line management that bestows responsibility upon them, which may result in them enjoying more freedom and flexibility in carrying out their work. This of course does not mean that workers enjoy this freedom with unfettered controls. In this case study, given the unique environmental conditions that the workers find themselves in, the positive response to being allowed freedom and flexibility in their jobs helps to neutralise any other unsatisfactory work factors.

The second question enquired about consent to plan their own work and further probed the element of autonomy.

Are you allowed to plan your own work?

The responses were as follows:

*P1. Yes, it's a big part of how we work, I am allowed to plan*

*P2. Yes, I do plan my work and [I am] allowed to work at my own pace.*

*P3 Yes, I am allowed to plan my work and plan with others which is good and gives us more time to plan.*

*P4. Yes, I am given a chance to plan on a daily basis and get advice from the superiors.*

*P5. Yes, happy.*

The participants seem to enjoy the autonomy element of their work, and it would appear from the statement by (P4) that the stores division may be employing a participative management style that focusses on teamwork.

The third question probed the element of task variety and enquired if the job involved a variety of tasks and how.

The responses were as follows:

*P1. Yes, do capturing, answer telephone and select materials for issues. I like a variety of work because I get more experience.*

*P2. Yes, absolutely when I am allowed to perform different jobs, it makes me happy.*

*P3. Yes, it does. The superiors help us and allow us to perform different work.*

*P4. Yes, I do coding, labelling and packing of goods. I enjoy doing a variety of work because it gives me more experience.*

*P5. Yes, but I cannot do a lot of different work like filing and working in dark places.*

All participants did indicate that they carry out a variety of tasks with themselves as performing duties such as filing, unpacking, counting, quality checks, housekeeping, stacking, cutting of cable, measuring, selection of materials, issuing of materials and receiving stock. The majority of participants appear to be motivated and quite enjoy the variety of tasks that they carry out. However, (P5) did point out that challenges were experienced when carrying out certain activities in places that are not well illuminated as an example. This impacts the variety of task activities that are in the workplace.

The respondents also were asked to indicate their experiences in respect of any challenges or problems regarding their productivity and service delivery to customers. Customer service and productivity are always critical aspects of the job hence they are at the forefront of warehousing services.

Do you experience any challenges in terms of productivity and service delivery?

The responses were as follows:

*P1. Yes, I do have problems with the computer system which goes offline sometimes, and customers have to wait for the paperwork to print.*

*P2. Yes, there are problems with [the] computer system. JDE goes offline often and delays work. Customers have to wait a long time to be serviced.*

*P3 Yes, lifts get broken from time to time, [and we] cannot move materials from ground floor to other floors. People also get stuck in the lifts. The truck also breaks down, [and] cannot deliver stock to depot stores. Computer system JDE also, a problem, goes offline.*

*P4. Yes, lifts break difficult to move materials. Remembers a time when staff members were stuck in the lifts for two hours. JDE system [is] very frustrating and customers have to wait.*

*P5. Yes, my eyesight is not too good.*

The participants mainly pointed out challenges regarding the computer system and JDE. They were referring to the enterprise resource planning (ERP) system that is being used by eThekwini Electricity at present called Jack Dan Edwards (JDE). It would seem that from its inception in 2016 at eThekwini Electricity this ERP package

has been fraught with glitches. The department has since been severely affected by downtime, server issues and incompatible interfaces. The consequences of this debilitate customer services and productivity. The negative impact of the system highlighted by the participants contributes negatively to the overall level of worker job satisfaction and motivation. The other challenges raised by participants are dysfunctional lifts and an unreliable stores delivery truck. The lifts do break down quite often, and repairs are delayed due to the unavailability of spare parts locally. There were incidents where employees were stuck in the lifts for hours at a time, which impacts the overall health and safety concerns in the workplace. All of this does contribute not only to employee dissatisfaction but also to lower levels of productivity.

The fifth question probed the element of problem solving where participants would be required to be creative and contribute solutions to problems. The stores environment is quite dynamic and changes in technology and processes require creative thinking to keep abreast of other organisations.

Does the job require you to be creative and contribute solutions to problems? Yes, or No, kindly explain your answer.

The responses were as follows:

*P1. Yes, it does when working with other assistants and we try to find new ideas.*

*P2. Yes, most of the time. We look at different problems and try to find solutions.*

*P3. Yes, we do face problems at work, but we work together to solve problems.*

*P4. Yes, I work with supervisors to try and find solutions to the problems.*

*P5 Yes it does but it is difficult for me because of my eyesight.*

The participants indicate an overall positive response with a resounding 'Yes'. However, the responses are not overwhelming. Indications are that certain participants require others to initiate any kind of creative thinking and innovation. This may not pose a problem however, individual creative thinking is also important in terms of leadership and fresh perspectives. Nevertheless 'group thinking' often leads to more 'participative outcomes' and may be a strong team motivator. One interviewee indicated that supervisors and line management are also involved in creativity and



contribution to solutions which encourages both the bottom-up and top-down management styles.

The sixth question enquired about the disability status of participants. The participants were engaged to provide feedback on their experiences and challenges that they may face when completing their jobs.

Do you have a disability or challenge that affects your ability to complete your work? Yes, or No, please elaborate.

The responses were as follows:

*P1. No, I do not have a disability.*

*P2. No, but I do suffer from high blood pressure, and it gets very hot in summer, so I struggle to finish my work.*

*P3. No. I do not have a disability.*

*P4. No.*

*P5. Yes, I am semi-blind because of the condition of my eyes. I find it a problem to see small print, so my colleagues have to write down my orders in bigger writing for me to read.*

The majority of the respondents do not declare any serious disability issues. It is clear that irrespective of any serious disability issues being declared, the participants nonetheless are affected physically by poor ergonomic factors that prevail in their workplace. These include, amongst other factors, heat, high levels of humidity and fumes. Hence, greater attention ought to be paid to modernising the stores. The advent of new technology has resulted in workplaces especially manufacturing and including warehousing being cleaner and safer working environments.

The respondents were requested to provide feedback about the element of social support and whether the job allowed the participant to interact and develop friendships in the workplace. Friendships and close working relationships could be associated with the fostering of teamwork resulting in increased job satisfaction and productivity.

Does your job allow you to interact and develop friendships in the workplace?

The responses were as follows:

*P1. Yes, it does. Having friends at work helps because we can help each other when needed.*

*P2. Yes, but I prefer working relationships and not personal [ones]. Personal relationships can affect work badly.*

*P3. Yes, we do get chances to make friends and it builds teamwork.*

*P4. Yes, it does. Helps us learn from each other and help each other.*

*P5. Yes, I have friendly colleagues who assist with my work.*

Further explanations revealed excitement and positivity in terms of brokering friendships at work. However, respondents also tried to make a distinction between working relationships as compared to personal relationships as the latter could lead to issues that may affect 'work badly'. The overall consensus of the participants is quite encouraging and lends itself to working in synergy.

The participants were requested to relate to the element of feedback and whether they receive adequate feedback about job performance from colleagues and management. Feedback is suggested to be crucial in terms of worker motivation and job satisfaction.

Do you receive adequate feedback from colleagues and management?

The responses were as follows:

*P1. Yes. I do get feedback especially when there is a query, or something went wrong.*

*P2. Yes, I enjoy feedback when my work is good.*

*P3. No. I do not get feedback because the supervisor communicates with the boss.*

*P4. Yes. We do get feedback, but we cannot respond directly with the controller.*

*P5. Yes, my supervisor has meetings with us, and we can tell him our problems.*

The majority of the interviewees were positive about the importance of feedback. The participants overall appear to be receiving adequate feedback from colleagues and management. This remains a significant factor in its contribution to the overall job satisfaction of employees.

The participants were probed to explain the element of ergonomics and whether they require “excessive bending or reaching”. Excessive stressors on the limbs and back of participants may lead to health and safety concerns. Moreover, this may increase cases of injury on duty (IOD) and is a growing concern with organisations globally.

Does your job require excessive bending or reaching? Yes, or No, kindly explain.

The responses were as follows:

*P1. Yes, I have to bend down to pack stock and reach in high places, but I use a ladder.*

*P2. Yes, but not all the time. When we get busy, we have to bend and reach to get to the stock.*

*P3. No. We only bend and reach a lot when the delivery truck comes or when we are busy in the mornings, but it is not too much.*

*P4. Yes, but not excessive but we do bend and reach from time to time.*

*P5. Yes, we work as a team, so it is easy. We get very busy sometimes.*

The majority of participants explained that their jobs required excessive bending or reaching. However, they did try to minimise this response by explaining that ladders were used and that excessive bending and reaching were only prevalent during peak periods or occasionally. Invariably this factor tends to be seen negatively as a consequence of the employee’s age and are often less capable of undertaking physical and strenuous work.

The next question required the participants to explain the element of work conditions and whether their work site was free of dust or noise. Investigations as indicated previously in this study have suggested that neatness and tidiness have a positive relationship with job satisfaction and psychological health.

The question was put together as follows:

Is your workplace free of noise or dust? Yes, or No, please explain your answer.

The responses were as follows:

*P1. The noise is not that bad, but the dust is a big problem.*

*P2. Yes, the dust is quite serious. The roller door is open all the time and dust and smoke get in. The noise is ok.*

*P3. Yes, the dust from the nearby landfill comes into the stores and settles on the shelves. It is difficult to breathe when cleaning the shelves.*

*P4. Yes, the forklifts do make some noise and is irritating. We have a lot of dust because of the trucks going past and raising the dust.*

*P5. No, we do not have a problem with noise and dust.*

The majority of interviewees pointed out that the dust issue is so appalling that it is difficult to breathe. Given that there is a landfill site located just above Springfield Main stores these views are therefore not surprising. Additionally, an informal settlement close to Springfield Main stores emits smoke and other pollutants. Historically, the stores at Springfield have always been affected by the dust and smoke problem, with scant attention being given by management to address the issue. However other stores away from the Springfield depot pose less of a risk in respect of noise, dust and other troublesome working conditions.

The interviewees were also asked to relate to the element of work conditions and whether they are comfortable in terms of humidity and temperature at their work sites. Studies have revealed that uncomfortable working temperatures and humidity have an adverse effect on job satisfaction.

The responses were as follows:

*P1. Yes, but gets very hot in summer because the windows are closed at Main Stores. The humidity makes it more uncomfortable*

*P2. No, the place is stuffy and hot. Windows are not allowed to be opened. The fans blow the hot and stale air. We need air conditioners.*

*P3. No, very humid in summer. Winter is ok because with windows closed it is quite comfortable.*

*P4. No, sticky and hot on most days. The fans do help but circulate hot dusty air.*

*P5. Yes, the main office is air-conditioned, and open the windows to let fresh air come in.*

Besides the dust issue discussed earlier, the interviewees are subjected to high temperatures and humidity that would appear to be aggravating factors at Springfield Main stores. These working conditions are quite horrendous and would appear to impact negatively on motivation and job satisfaction. In the interviews it was pointed out that management was informed about these dire working conditions in the past, however very little has been done to address this issue. The management cited budget constraints and structural engineering challenges as the reasons for not attending to these issues. However, one has to note that not all offices face these harsh environmental conditions.

The interviewees were asked to describe how COVID-19 has affected job satisfaction and productivity at work. Due to the COVID-19 pandemic, there have been numerous changes in terms of working arrangements such as shorter working hours, streamlined work processes and roster amendments. This question intends to explore the reactions of participants in this regard.

The responses were as follows:

*P1. Very bad. COVID-19 has affected us badly because we had a change in roster and had to work for those who were not at work.*

*P2. We had less pay because overtime was cut, and we were not allowed to come out on standby as usual.*

*P3. We were overworked. We were very anxious at work when we worked with contractors and people from outside.*

*P4. Stores ran out of materials because suppliers were also affected by COVID-19. We were tired working with less staff.*

*P5. We had a roster system, and it was not bad. We managed because our supervisor planned the work very well.*

COVID-19 has had a debilitating effect on many organisations, and it would appear that the stores division at eThekweni Electricity was not spared either. The participants expressed a fair amount of negativity regarding the impact of COVID-19 in terms of

job satisfaction and productivity. They complained about being overworked due to other employees being off sick due to COVID-19. Others complained that they lost out on overtime and standby pay and felt anxious due to the uncertainties associated with COVID-19. Equally one could conclude that good management of the stores minimised the negative impact of COVID-19 on the workplace to a degree.

The thirteenth question dealt with health hazards that may exist in the workplace. Interviewees were asked:

Does your job take place in an environment free from health hazards?

The responses were as follows:

*P1. No, the toilets are not working sometimes, and the plumbing is not good. A lot of dust in the store, and very hot sometimes.*

*P2. No, the shelves are too dusty. Some staff are not wearing their masks.*

*P3. No, the fire extinguishers are not serviced regularly. The markings on the stores' floors are not visible. The top floor is very dusty.*

*P4. No, the lifts keep breaking and we are scared to use the lifts. The store gets hot at times.*

*P5. Yes, our stores is very safe and clean.*

Health and safety are paramount in terms of working conditions. The majority of interviewees responded with an emphatic 'No', suggesting that their work environments are fraught with health and safety hazards and challenges. Participants complained about the poor plumbing and toilets that were 'not working sometimes'; the shelves were too dusty and certain staff were not following COVID-19 protocols by not wearing masks. Equally, the stores' layout has been highlighted, in that demarcation lines on the stores' floors were not clearly visible, fire extinguishers were not serviced regularly and the lifts were defective, and occasionally the eThekwini Electricity Stores gets hot. The complaints raised are critical and may have serious implications on the health and safety of employees.

The interviewees were also asked whether physical strength and endurance was necessary to work in the stores.

The responses were as follows:

*P1. Yes, it does. Sometimes we have to lift heavy materials and stack them in high places.*

*P2. Yes. We do have trolleys and pallet jacks but sometimes we need to bend and carry heavy stuff when placing it onto the counter.*

*P3. Yes, we have to assist the general workers at times to lift and pack material, but it is manageable.*

*P4. Yes, but not all the time. When the stock is too heavy, I ask for assistance.*

*P5. No, not all the time. We all work as a team.*

The responses although predominantly 'Yes', seem to indicate that the participants are coping adequately with the requirement that one should ideally be physically strong to carry out certain aspects of the job. However, they do have to depend on assistance from other employees or mechanical equipment. So, to a significant extent, this was not a factor in causing job dissatisfaction.

The final question dealt with whether participants worked in an environment with adequate space to move or work in terms of leg room, clearance eye height and reach.

The responses were as follows:

*P1. Yes, we have enough space to work.*

*P2. Yes, but the aisles are too narrow for two trolleys to pass by at once. Some shelves are too high and we use ladders.*

*P3. Yes, we do have stools and ladders to use. There is plenty of space to work in.*

*P4. Yes, there is no problem with working space.*

*P5. Yes, but the cable cutting area is slightly small. Cannot move the cable drums properly.*

The participants in general were quite content with the space that they had to work in. Given that the respondents were drawn from different stores scattered across the city, emphasis was placed on the narrow aisles and some of the shelving that was too high

in terms of reach at Springfield Main stores. In particular, the cable cutting area at the depot store was said to be too small. Workspace has been under the spotlight recently due to COVID-19 safe distancing protocols in many organisations.

## **4.8 COMPARATIVE STUDIES**

A study by Choi, Koo and Fortune (2020), where a group of new graduates at a school for social work were investigated, resonates with this study in terms of the correlation between working relationship and job satisfaction. Additionally, Mharapara, Staniland, Stadler, Clemons and Dixon (2021), in a study examined the drivers of job satisfaction in midwifery, pointed out the positive association of empowerment and decision-making autonomy with job satisfaction. However, research conducted by Daniels, Gedikli, Watson, Semkina and Vaughn (2017), on job design, employment practices and well-being suggests that participatory approaches and job redesign training had mixed effects on the welfare of employees.

## **4.9 SUMMARY**

The semi-structured interview sessions were found to be invaluable in terms of supplementing the quantitative data and providing more clarity on the work design dimensions and elements. Additionally, the interview sessions helped to triangulate and converge both sets of data from a quantitative and qualitative perspective. The data gathered from the interview sessions largely correlated with the data from the questionnaire. The elements of ergonomics, physical demands and work conditions received highly negative and dismissive responses from most participants. The interviews that formed the qualitative segment of the study were found to be more expressive and collaborative. Additionally, the feedback received from the interviewees revealed a general alignment with the data gathered from the questionnaire.



## **CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 INTRODUCTION**

The primary aim of this study was to assess the impact of work design on job satisfaction at the eThekwini Electricity stores in the city of Durban, in the KZN province of SA serving as the case study. A summary of the main results of the study and recommendations on the impact of work design on job satisfaction at eThekwini Electricity stores are covered in this chapter. Further study recommendations and conclusions are also covered herein. The key objectives that were addressed are as follows:

Examination of the theoretical and contextual aspects together with practices of work design factors/elements at eThekwini Electricity stores.

To analyse work designs and ergonomics factors to develop methods that may simplify and streamline work processes at stores.

To investigate the relationship between work design factors and job satisfaction and, to determine if there is a better fit that could improve production and employee contentment.

To examine current processes at stores; and to recommend a model for work designs and ergonomic interventions, which would create a more comfortable and safer working environment.

We now turn to examine and conclude on the key objectives of this study, followed by recommendations of the study.

### **5.2 OBJECTIVE 1**

**Examination of the theoretical and contextual aspects together with practices of work design factors/elements at eThekwini Electricity stores.**

Work design in the workplace tends to impact employees both psychologically and physiologically. This in turn is perceived to have an impact on job satisfaction and motivation. This study reveals an overall positive notion in respect of job satisfaction by employees in respect of key elements that impact one's work activities namely,

autonomy, task variety and job complexity. This finding is corroborated by Fahr (2011) in a study that encouraged autonomy and multitasking as part of an enriched work design which resulted in higher levels of job satisfaction. In examining the work design elements of information processing and problem solving, it appears that employees, in general, do enjoy the challenge of dealing with managing and processing a high level of information with automation and technology. Gibbs (2017), in a study, proposed that the supplementation of technology with manual work improves quality, innovation and productivity. Additionally, it is found that technology could be associated with increased intrinsic motivation in completing high skill jobs. However, a significant portion of employees in this study seems to display ambivalence towards information processing, which may indicate a lack of understanding in respect of standard operating procedures or work processes.

Due to the strenuous nature and physical rigours of work in a warehousing environment, teamwork is crucial in overcoming these challenges through social support and interdependence. Employees were found to have forged good working relationships with colleagues that could encourage synergy and enhance productivity. Additionally, employees have expressed general contentment with their ability to accept work of a reasonable standard from colleagues, and in turn, reciprocate the same. This notion is posited by Anya (2015) in a study that advanced the role of teamwork rather than individuals and the resultant impact on production and job satisfaction. Moreover, working in groups may create an alignment of individual thoughts and ideas to the vision of the organisation, as corroborated in a study by Ali et al. (2013) stating that the success of any organisation depended on a whole group of individuals that included supervisors and subordinates.

The work design settings at eThekwini Electricity stores are diverse in terms of labour requirements, building structure and locality. The stores at Springfield Main requires a more labour-intensive program as it holds the bulk of all stock holdings in eThekwini Electricity in comparison to depot stores where the workload is appreciably lighter. Most contractors and internal staff are instructed to visit this store due to the higher availability of stock and the central proximity to the whole metropolitan region. Depot stores in contrast keep a lower level of stock due to demand from customers. The Springfield Main stores building is approximately forty years old and structurally

outdated in many respects. To date, very little has been done in terms of renovation and upgrades to this building. There are no designated paraplegic parking lots, and accessibility to ablution facilities is limited. Health and safety signage associated with equipment use and disability are not present. This particular store does not have a queuing system or information desk. Additionally, Springfield Main Stores is located next to an informal settlement and landfill. The dust and smoke emanating from the landfill and informal settlement filters through into the stores and creates an array of health and safety challenges for employees.

The depot stores in comparison are situated in areas free of informal settlements and landfills hence generally not experiencing such issues. This study has pointed to a significant shift toward job dissatisfaction by employees when responding to work design elements involving ergonomics, physical demand and work conditions. Employees, especially from Springfield Main Stores have complained of the excessive heat and dust that they have had to contend with. Working conditions often play a huge role in terms of employee health and safety, as postulated by Roy, Van der Weijden and de Vries (2017) who argue that due to adverse physical working conditions, scarce resources and fatigue, employees may suffer from burnout. Moreover, a huge proportion of employees were dissatisfied with the lighting and noise in their working environment which could negatively affect job satisfaction as advanced by, Shareef, Husien and Omer (2018) in a study that suggests comfort, improved air quality, plants and adequate natural lighting would have a positive effect on job satisfaction. Employees in this study have also complained about breathing issues, coughing and unacceptable dust levels, especially on the top floor of Springfield Main Stores. The dust problem is exacerbated by the landfill site near the stores, where dust and fine sediment appear to enter through the open windows from strong winds. Due to the lack of air conditioning, the windows need to be kept open to mitigate the humidity and unpleasant heat.

## 5.3 OBJECTIVE 2

### **Work designs and ergonomics factors that may simplify and streamline work processes.**

Work design and ergonomic factors relate to designing jobs to suit the workers so that the work itself is safer and more efficient. While the simplification and streamlining of work processes lend themselves to increased productivity and a more comfortable working environment. In this study, the respondents pointed to a lack of proper resources, planning and equipment in conducting their tasks. Arising from this study the following work design and ergonomic steps may be taken to simplify and streamline work processes which should contribute positively to better productivity and ultimately increased job satisfaction, these are:

- Chairs with higher backs to provide adequate lumbar support and headrest cushions for a more relaxed posture to be provided to storekeepers working for long hours on the computer.
- Arrange workstations in a manner that allows for frequently used tools and equipment to be within reaching distance. Shelving to be elevated to prevent unnecessary bending to reach for materials.
- A safe working load (SWL) should be established to ensure employees do not carry more weight than is stipulated in the Occupational Health and Safety Act (OHS Act).
- Appropriate lift trucks should be provided instead of using ladders to reach higher shelving.
- Temporary seating should be provided for general workers to rest and rejuvenate when not required to carry out duties on their feet.
- Suitable trolley jacks should be provided to transport most of the materials instead of relying on manual labour.
- An intercom and other digitised communication devices should be installed to communicate with colleagues on different floors instead of workers climbing stairs just to give instructions or to communicate with each other.
- Ear protection should be provided to all employees working in noisy sections of the stores.

- Installation of more eco-friendly LED fluorescent tubes to improve lighting and contribute to a 'greener environment'.
- Appropriate cooling systems should be installed to minimise the heat and humidity in the working areas.
- Mandatory health and safety inspections by health and safety representatives should be undertaken on a monthly basis.
- A queueing system should be employed to avoid congestion at the stores' counter and to enhance customer service.
- Computer monitors should be positioned away from the windows to prevent the glare from causing eye strain.
- The current enterprise resource planning system (JDE) needs to be assessed with a view to reducing down time and improving interface compatibility.
- Storekeepers and store clerks should be given work breaks and rest periods to mitigate the risks of injury caused by repetitive actions such as carpal tunnel syndrome.
- A paperless office working environment to promote environmental friendliness should be encouraged.
- Encourage the use of plants and foliage colour in work areas to help induce a more relaxing and calming effect on employees.

## 5.4 OBJECTIVE 3

**The relationship between work design factors and job satisfaction, and to determine if there is a better fit that could improve production and employee contentment.**

The relationship between work design factors and job satisfaction to establish a better fit is generally dependent on how well an employee is suited to a particular job. The work design needs to be well constructed in terms of clarity in responsibilities and competencies.

In this study "autonomy" consists of three sub-elements namely, work scheduling autonomy, decision-making autonomy and work methods autonomy. In terms of planning and scheduling of work, the employees were generally satisfied and enjoyed the freedom to utilise their knowledge and skill sets. Notwithstanding, a significant

portion of employees expressed a sense of uncertainty toward their ability to plan and schedule their work, hence they should be afforded more opportunities to fully utilise their skills and knowledge. In respect of decision-making autonomy, the findings correlated closely to work scheduling autonomy. However, more attention is required to address the ambivalence regarding the two aforementioned sub-elements of autonomy. When we examine work methods autonomy the results demonstrate a negligible dissatisfaction rate, while exhibiting a higher neutral response to findings in the sub-elements of work scheduling and decision-making autonomy. Further investigation into the segment of uncertain employees in respect of work methods autonomy is also required.

The semi-structured interviews point to unanimously positive responses for job satisfaction in all sub-elements of autonomy, however despite this, additional steps ought to be taken by line management in ensuring that work processes are examined, and appropriate training is provided to those employees who tend to remain uncertain in respect of planning and scheduling their own work routines. Additionally, work that needs to be done to accomplish the broader organisational objectives ought to be assessed so that the jobs are designed to allow for tasks to be performed within a typical workday rather than having too many tasks carried over into other days.

Employees generally tend to get immense satisfaction in undertaking a wide range of tasks and performing different jobs. The element task variety was well received by respondents in this study, where the overall satisfaction rate exceeded sixty (60) percent. The findings are in line with a study by Onimole (2015), where job rotation, job enrichment and job enlargement were viewed as having a positive effect on worker motivation. This study, therefore, tends to confirm that it remains a useful tool for organisations to seek ways of continuously improving the tasks and work experiences of their employees. Not only does this enhance greater job satisfaction, but it also builds a substantive knowledge and skills database in an organisation for future growth and expansion in that it has the necessary skilled human resources to deploy as the business grows. The qualitative segment of the study presented an overall positive response for task variety and employees were quite content in this respect. This overall observation is equally important where there remain employees who were not

eager to expand their work routines and have enlarged jobs. These employees also need to be encouraged to improve their overall skills and knowledge in the workplace.

In respect of job complexity, the study pointed to an overwhelming response of satisfaction with regards to undertaking simple tasks one at a time. A study by (Hepworth, 1982, as cited in Onimole, 2015) did caution that simplified work led to boredom and frustration. However, this finding does not necessarily mean that employees would not enjoy multitasking or performing more complex tasks, which was supported by positive responses in the qualitative part of the study. The response in this study does point to opportunities to improve the overall nature of tasks per job so that employees are challenged in their jobs rather than simply being bored because of the simplicity of the tasks. Given that we are now in a digital era, the processing of information is also accelerating at a tremendous pace, and this requires employees to adapt to this new era in the world of work. To this end, a typically busy store processes information in the course of its business. In this study, the monitoring and analysis of large amounts of information was viewed by the respondents as an element that contributed to significant job satisfaction. Hence it is important that employees are trained or afforded the skills to contribute adequately to the productivity of the organisation from a digital perspective.

From the results gathered, it would appear that employees, in general, were content with opportunities to be creative and to contribute to finding solutions to problems. Interestingly, the feedback from the semi-structured interviews indicates a propensity by employees to team up either with work colleagues or supervisors to create unique ideas and solutions to problems. This form of participative engagement inspires teamwork and affords opportunities for more employees to share their views.

The warehousing working environment is conducive to building relationships in both personal and professional capacities since employees usually work in teams with a significant degree of interdependence. The findings reflect a positive satisfaction rate by employees, however, this study also revealed that certain employees find it difficult to forge close relationships. To this end, it is useful that organisations pay attention to this as it is bound to have some implications for job satisfaction. Employees also revealed that working as a team helped them learn more about the job and promoted a sense of camaraderie amongst them, although some employees feel that personal

relationships should not be mixed with working relationships as work performance could be affected.

The element of interdependence relates quite closely to social support, hence unsurprisingly the results do present with similarities. Although the satisfaction rate amongst employees, in general, was high, a significant portion of employees was not certain. This finding may point to poor supervision or inadequate training and needs to be addressed urgently.

A critical element to one's job and its implications for overall job satisfaction is the employee's interaction with customers both inter and intra the organisation. In this study employees at eThekweni Electricity stores have a crucial role to play in terms of providing first-rate customer service to internal staff as well as members of vendor companies providing a service to the electricity department.

In general, employees would be familiar with internal staff from other departments as well as outsourced contractors since virtually all of them return periodically to interact with the stores department. A substantial number of employees were satisfied with spending adequate time and interacting with people outside of the organisation, although as in every organisation, there would be employees whose jobs require minimal interaction with customers or external stakeholders. This is most apparent at Springfield Main Stores where general workers are required to clean, stack and undertake duties that often exclude them from direct interaction with customers. It is suggested that those employees who do not generally interact with people from outside the organisation be given an opportunity through job rotation to interact with external customers and other stakeholders. This has the potential not only for enhanced individual job satisfaction but also to enhance better public relations for the organisation given that more employees get to sell and promote the organisation while interacting with customers and external stakeholders rather than just a few employees.

A further component influencing overall job satisfaction is that of ergonomics. Ergonomics is quite a broad subject, hence in terms of this study, the element is narrowed down to seating arrangements and the demands of excessive reaching and bending in a warehousing context. The warehousing environment as per this case study is generally quite rigorous and demanding, hence drawing the excessive



reaching and bending aspects of work into the spotlight. Therefore, it is not surprising that the employees expressed dissatisfaction with this aspect of their work as they are required to reach excessively and bend down to fetch materials. Understandably, a significant portion of the general worker component is usually on their feet for most of the day. Specifically in this study, certain storekeepers who use chairs were dissatisfied and requires more scrutiny in terms of addressing any discomfort or potential injury that may occur because the basic equipment and furniture provided may be of poor quality for the harsh working environment. The interviews also revealed that employees at the depots do not face such gruelling challenges as their Springfield Main Stores counterparts. To mitigate the challenges associated with ergonomics it is suggested that suitable chairs that support the back and head region be provided to affected employees as well as other pieces of furniture that aid body comfort in the performance of the job. Additionally, the design of shelving could be adjusted to allow easier access to materials in terms of reach and height. These observations would be equally applicable in any stores' environment.

The warehousing environment as depicted in this study is often arduous and labour intensive. The core functions revolve around manual tasks which in some instances require a great deal of muscular endurance and physical effort. The employees in this study not surprisingly have expressed overall dissatisfaction, although it must be kept in mind that most of the dissatisfied employees were located at Springfield Main Stores which generally has poor environmental conditions including excessive heat, pollution and dust. The spotlight is focussed once again on Springfield Main Stores which is devoid of the suitable use of technology and mechanisation. The persistence of using labour-intensive methods to perform tasks could result in general fatigue and be negatively associated with job satisfaction. So, there is no doubt as evident by various other studies that where physical demands are a job requirement, there would generally be higher levels of job dissatisfaction and if it is compounded by other negative factors impacting one's job, the level of job dissatisfaction will grow significantly. Hence, it is suggested that automation and mechanisation be introduced to supplement the workload associated with immense muscular and endurance requirements.

The working conditions considered in this study include noise, lighting, temperature and humidity, and cleanliness. Employees, in general, did suggest that noise was prevalent at unreasonable levels, given that such noise emanated from vehicles such as forklifts and delivery trucks together with stores equipment. The interviews revealed a significant issue in terms of dust at Springfield Main Stores. In mitigation, the use of dust masks, noise reduction apparatus, efficient cooling systems and adequate lighting will lessen the negative effect of such environmental working conditions. Additionally, a more thorough and rigorous cleaning process should be adopted to clear the work areas of dust. To enhance the work conditions, it is suggested that green initiatives such as introducing plants to create a more natural setting whilst contributing to more healthy and balanced oxygen levels. Studies suggest that a cool, beautiful and comfortable work environment is conducive to healthier levels of psychological and physiological outcomes in employees.

## **5.5 OBJECTIVE 4**

**Model for work designs and ergonomic interventions, which would create a more comfortable and safer working environment.**

As gathered from the discussions and findings in this study, the eThekweni Electricity stores do seem to be ill-equipped in certain aspects of work design. For the purposes of creating a model for work design at eThekweni Electricity stores, work design elements that are positively associated with job satisfaction in this study are excluded from the model. Included in the model are the work design elements that were found to be contributing to job satisfaction. Managerial or remedial interventions could be applied to instances where respondent's findings pointed to a higher level of dissatisfaction and further, where the results in this study point to respondents demonstrating ambivalence when responding to certain statements, further investigation by management is needed.

The four managerial interventions used in the model are:

- Reviewing work methods
- Training and Development programs
- Using appropriate technology and mechanisation
- Promoting ergonomic standards and use of green environment initiatives.

Certain work design elements in this study pointed to a potential deficiency in processes such as job complexity, information processing and problem solving that impacted job dissatisfaction. Hence reworking or redesigning processes ought to improve current work methods. The study also reflected a possible lack of skills in certain areas of work that could be improved through training and development. The challenges associated with the elements of ergonomics, physical demand and work conditions could be mitigated through the use of appropriate technology, mechanisation, promotion ergonomic standards and implementation green environment initiatives.

The recommended model for work design at eThekweni Electricity stores is illustrated as follows (Figure 5.1).

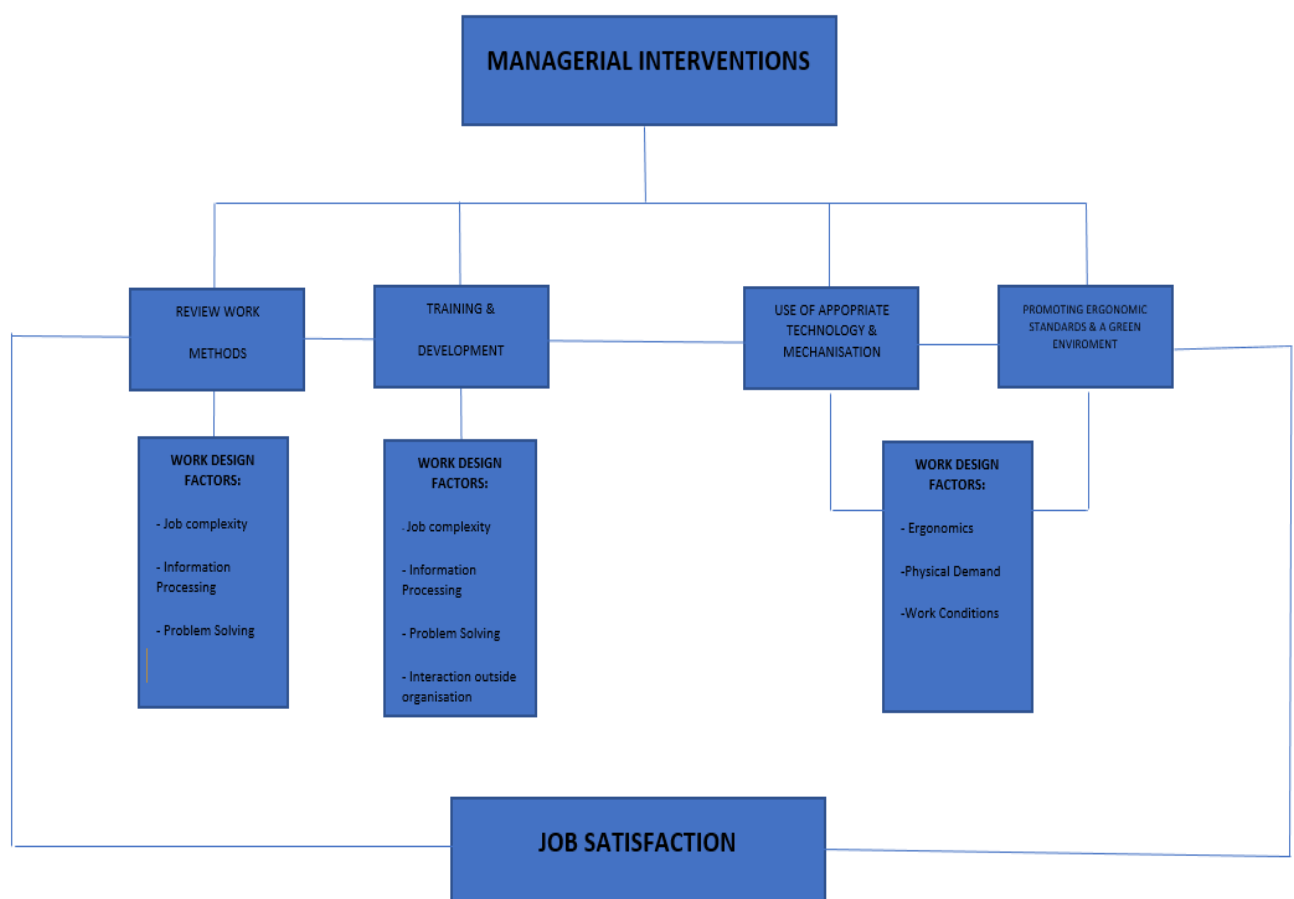


Figure 5.1 Plausible model for work design at eThekweni Electricity

## **5.6 RECOMMENDATIONS**

It is suggested that certain work methods and processes be reviewed especially those relating to work design factors such as job complexity, information processing and problem solving. It is further suggested that reviewing and improving work methods and processes requires not only the line managers involvement, but also specialists in work study or industrial engineers as well as further assistance from the human resource specialists. In such exercises, employees directly affected should also be fully engaged so that the best possible work processes may be arrived at that contribute not only to job satisfaction but also improved worker productivity.

This study also pointed to employees who were unsure about their contribution to the organisation or had an uncomfortable understanding of their job requirements and their overall contribution to the business and to this end appropriate training and development interventions for such employees should be introduced. Appropriate training courses should be identified by line management and human resources and such programs ought to be in the form of contiguous development.

Work design factors such as ergonomics, physical demands and work conditions as applicable in the stores' department have leaned towards higher levels of dissatisfaction. The rigours associated with a warehousing environment are evident from the findings revealed in this study. Employees especially general workers are required to be on their feet for most of the day and carry heavy electrical equipment. Furthermore, these employees need to rest as and when they get scheduled breaks as part of a reformed work design process. Suitable ladders and reach trucks ought to be provided to mitigate the exertion of excessive bending and reaching. The individual interviews highlighted another disturbing aspect of excessive heat and dust in the stores' work area. The windows are usually kept open at Springfield Main Stores to allow cool air to enter because the building has no air conditioning. Fans have been provided however the fans simply recirculate the same hot and dusty air. It is recommended that full scale industrial air conditioning be installed to mitigate this setting, where the windows would have to be closed which would prevent dust from entering the stores' area, and cool air would be generated from the air conditioning to overcome the heat. Some employees were also found to be dissatisfied with the noise emanating from the forklift delivery trucks and the stores' cutting equipment. It is

recommended that the affected employees be provided with earmuffs, especially when working with noise generating equipment. Employees also pointed out that the lifts were often broken which required the employees to carry heavy materials up and down the stairs, which could result in serious injury and fatigue. Hence a properly devised maintenance plan for lifts ought to be part of the additional consideration in the revision of work processes and design.

## **5.7 RECOMMENDATIONS FOR FUTURE STUDY**

This study used the Work Design Questionnaire (WDQ) to address the various elements of work design and its impact on job satisfaction at eThekwini Electricity stores which is unique to a local government context. Only pertinent elements of work design that resonated with the conditions and setting of the study were used. This study was limited to stores' personnel and the latter part of it was undertaken in an environment dictated by COVID-19 regulations. However, the approach and methodology used in this study could be easily adopted in any stores' environment, especially in a local government setting.

## **5.8 SUMMARY**

In this study work design factors such as “autonomy and “task variety” were viewed quite favourably by employees in terms of their contribution to job satisfaction. The employees were overwhelmingly content and this suggests that these work design factors are well entrenched, managed and implemented at the eThekwini Electricity Stores. The study in the same vein showed up other work design factors such as job complexity, information processing and problem solving, which caused not necessarily job dissatisfaction but created an environment of uncertainty or lack of clarity from an employee's perspective. Where there remains such uneasiness in the workplace which may have the potential to lead to job dissatisfaction, those work methods and processes ought to be revisited with a view to streamlining and attaining more targeted outcomes. Training and development were suggested for employees in respect of job complexity, information processing, problem solving and interaction outside the organisation. This intervention would assist in improving competencies and honing work skills. Equally, work design factors in this study, namely ergonomics, physical demands and work conditions were identified as factors that cause greater job

dissatisfaction. It is suggested that the use of appropriate technology and mechanisation be implemented to mitigate the rigours of these work design factors. Additionally, it is recommended that improving health and safety standards together by encouraging 'green environment' initiatives such as the increased use of natural and LED lighting, digitising communication to save paper and alerting employees in real time of any dangers or equipment failures. In order to address the identified factors that have the propensity to cause job dissatisfaction, a plausible model for work design and ergonomic interventions at eThekweni Electricity stores was proposed which ought to create a safer and more comfortable working environment.

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## ANNEXURES

### ANNEXURE A: TURNITIN REPORT

#### Turnitin Originality Report

Processed on: 06-May-2022 11:27 SAST  
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MASTERS THESIS By Dhanesh MANIRAM

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## ANNEXURE B: GATE KEEPERS REPORT



### TRADING SERVICES Electricity Unit

1 Jeff Taylor Crescent  
Durban, 4001  
P O Box 147, Durban, 4000  
Tel: 031 311 1111, Fax: 031 311 9010  
[www.durban.gov.za](http://www.durban.gov.za)

Dear Sir/Madam,

I hereby grant permission to Mr. Dhanesh Maniram (ID Number: 6810295418087) to conduct research within the Stores section of the Procurement Department of EtheKwini Municipality (Electricity).

I am aware that his project involves recruiting employees for research and, will be conducted in a working environment (site) at EtheKwini Electricity, and the study involves the collection of data.

I also understand that all information collected from individuals will be done with duly informed consent from the participating individuals, and that employees can refuse participation with no negative consequences.

I am also aware that this research is conducted in fulfilment of his Masters Degree at Durban University of Technology.

The title of his Dissertation is: **Influence of Work Design on Job Satisfaction at Electricity Stores.**

Regards,

Mr. J. Mpetsane

Manager (Electricity Procurement)

2015-11-25.

**J.P. MPETSANE**  
Tel: 031 311 9420

## ANNEXURE C: QUESTIONNAIRE (QUANTITATIVE)

I am a student of Durban University of Technology. I am conducting an important research project that will require your assistance. The purpose of the study is to assess the impact of work design factors on job satisfaction at Electricity Stores department, eThekweni Municipality, Durban SA. You are required to voluntarily complete the following questionnaire, and there is no need to reveal your name or designation.

### BIOGRAPHICAL INFORMATION

Please insert an **(X)** in the block that relates to you. You may select one option only.

NB: PLEASE DO NOT IDENTIFY YOURSELF OR STATE YOUR SERVICE NUMBER ANYWHERE ON THIS DOCUMENT

#### 1> GENDER

MALE
------

1

FEMALE
--------

2

#### 2> AGE

0 -25
-------

1

26 -35
--------

2

36- 45
--------

3

46 - 55
---------

4

56 - 59
---------

5

60+
-----

6

#### 3> TENURE (number of years worked)

0 - 5
-------

1

6 - 10
--------

2

11- 15
--------

3

16 - 20
---------

4

21 - 29
---------

5

30+
-----

6

#### 4> EDUCATIONAL QUALIFICATIONS

SECONDARY (NO MATRIC)
-----------------------

1

MATRIC ONLY
-------------

2

DIPLOMA/DEGREE
----------------

3

HONS/BTECH
------------

4

OTHER: State
--------------

5

#### 5> MARITAL STATUS

SINGLE
--------

1

MARRIED
---------

2

DIVORCED
----------

3

WIDOWED
---------

4

#### 6> BASIC SALARY PER MONTH (IN RANDS)

5000 AND LESS
---------------

1

5001 - 8000
-------------

2

8001 – 10 000
---------------

3

10 001 - 14999
----------------

4

15000+
--------

5

#### 7> DISABILITY

YES

1

NO

2

## **QUESTIONNAIRE**

### **[WORK DESIGN QUESTIONNAIRE]**

PLEASE RATE THE FOLLOWING QUESTIONS ON A LIKERT 5 POINT SCALE.

PLEASE INSERT AN (X) IN THE BLOCK THAT RELATES TO YOUR SELECTION.

YOU MAY CHOOSE ONE OPTION ONLY.

#### **KEY:**

##### **CODING OF DATA:**

1 = VERY DISSATISFIED

2 = DISSATISFIED

3 = NEUTRAL

4 = SATISFIED

5 = VERY SATISFIED

- 1> **VERY DISSATISFIED** - MEANS THAT I AM VERY DISSATISFIED WITH THIS ASPECT OF MY JOB.
- 2> **DISSATISFIED** - MEANS THAT I AM DISSATISFIED WITH THIS ASPECT OF MY JOB.
- 3> **NEUTRAL** - MEANS HAVING AN UNBIASED OR IMPARTIAL VIEW WITH THIS ASPECT OF MY JOB
- 4> **SATISFIED** - MEANS THAT I AM SATISFIED WITH THIS ASPECT OF MY JOB.
- 5> **VERY SATISFIED** - MEANS THAT I AM VERY SATISFIED WITH ASPECT OF MY JOB.

Number	Question	Very Dissatisfied 1	Dissatisfied 2	Neutral 3	Satisfied 4	Very Satisfied 5
	<i>Task Characteristics</i>					
1	The job allows me to plan how I perform my duties.					
2	My job allows me to decide on how to schedule my work.					
3	The job gives me a chance to make decisions on my own.					
4	The job gives me a chance to decide what methods to use in my work.					
5	My job requires me to do different things.					
6	The job requires doing a wide range of tasks.					
	<i>Knowledge Characteristics</i>					
7	My job requires that I perform one task at a time.					
8	The job involves doing relatively simple tasks.					
9	My job requires that I monitor a large amount of information.					
10	The job involves a great deal of information analysis.					
11	The job requires that I be creative.					
12	My job requires that I create unique ideas and solution to problems.					
	<i>Social Characteristics</i>					
13	I have opportunities to develop close friendships in my job.					
14	The people I work with take a personal interest in me.					
15	Other jobs depend directly on my output.					
16	I cannot complete my job unless others do their work.					
17	The job involves much interaction with people outside my work.					
18	My job requires that I spend much time with people outside my work.					

Number	Question	Very Dissatisfied 1	Dissatisfied 2	Neutral 3	Satisfied 4	Very Satisfied 5
	<i>Work Content</i>					
19	The seating arrangements on the job are adequate in terms of comfort and postural support – Ergonomics.					
20	The job involves excessive reaching and bending (reverse scored) – Ergonomics.					
21	The job requires a lot of muscular strength and endurance. – Physical demands.					
22	My work place is not very noisy. – Work Conditions.					
23	The climate at work is comfortable in terms of temperature and humidity – Work Conditions.					
24	The lighting and illumination at work is adequate- Work Conditions.					
25	The job environment is clean and free from dust - Work Conditions.					
	<i>Job Satisfaction</i>					
26	Your overall rating of job satisfaction in terms of work design.					



## **ANNEXURE D: INTERVIEW SCHEDULE (QUALITATIVE)**

### **Unstructured Interview Questions:**

- 1> Does your job allow you freedom and flexibility in carrying out your duties?
- 2> Are you given the opportunity to plan your own work?
- 3> Does your job involve performing a variety of tasks?
- 4> Do you experience any challenges in terms of productivity and service delivery?
- 5> Does the job require you to be creative and contribute solutions to problems?
- 6> Do you have a disability or challenge that affects your ability to complete your work?
- 7> Does your job allow you to interact and develop friendships in the workplace?
- 8> Do you receive adequate feedback from colleagues and management?
- 9> Does your job require excessive bending or reaching?
- 10> Is your workplace free of noise and dust?
- 11> Is your workplace comfortable in terms of temperature and humidity?
- 12> How has COVID-19 affected your job satisfaction and productivity at work?
- 13> Does your job take place in an environment free from health hazards?
- 14> Does your job require a lot of muscular strength and endurance?
- 15> Do you work in an environment that allows for all size differences between workers in terms of reach, clearance eye height, leg room etc.?

## ANNEXURE E: PARTICIPANT'S LETTER OF CONSENT



**Faculty of Management Sciences**

**Department of Public Management & Economics**

Date: 25<sup>th</sup> November 2020

Dear Participant,

Thank you for showing interest in the study. I am conducting an important research project, in part fulfilment of a Masters Degree in Public Management. The purpose of the study is to assess the influence of work design factors on job satisfaction at eThekweni Electricity Stores, due to numerous complaints received from staff members. The complaints were based on alleged deteriorating environmental conditions such as dust, humidity and increase of injury on duty (IOD) incidents.

Your kind assistance in this study is immensely appreciated and will contribute significantly to my study. The outcomes of the study will also seek to benefit you and the organisation, in improving working conditions and elevating job satisfaction. Please note that participation in this study is completely voluntary. You can refuse or opt out of the research process whenever you wish. The information that you provide will be used for research purposes only and will be kept completely confidential.

Information will be gathered from you through questionnaires. I will be submitting the questionnaires to you in due course. Please complete them, and return to me in a sealed envelope. The questionnaires can be returned to me on a date still to be established. Should you wish to discuss this study further, please feel free to do so. The contact details are furnished below.

Yours sincerely

D. Maniram

Student

Contact Details: Tel. (031) 3119207/ 0725145903

Dr. G. Chetty

Supervisor / Promoter

Contact Details: Tel. 0836416444

## ANNEXURE F: INFORMATION LETTER FOR PARTICIPANTS



### LETTER OF INFORMATION

**Title of the Research Study:** Influence of Work Design factors on Job Satisfaction at eThekwin Electricity Stores.

**Principal Investigator/s/researcher:** Mr. Dhanesh Maniram (B-Tech – Business Management)

**Supervisor:** Dr. G. Chetty

**Brief Introduction and Purpose of the Study:** The purpose of this study is to assess the influence of work design on job satisfaction of employees at eThekwin Electricity Stores. Complaints were received from employees with regards to deteriorating working conditions, hence the need to conduct a study.

**Outline of the Procedures:** A meeting prior to the study is going to be held with you to explain your responsibilities, outcomes and to allow you an opportunity to enquire about the study. A letter to you as per PG2a, will be drafted to request consent and to provide information regarding the study.

**Risks or Discomforts to the Participant:** Not applicable. The study does not involve any invasive medical or scientific procedures to be carried out on participants.

**Benefits:** There will be no monetary or other benefits derived from study to you or the researcher.

**Reason/s why the Participant May Be Withdrawn from the Study:** There will be no adverse consequences to you should you choose to withdraw from participating in study.

**Remuneration:** You will not receive any monetary or other types of remuneration from participating in the study.

**Costs of the Study:** You will not be expected to cover any costs towards the study.

**Confidentiality:** The contents of the study will not be disclosed to anyone in any form. You will also be de-identified, and I will be the sole custodian of the information and records obtained from the study.

**Research-related Injury:** I have obtained the Gatekeeper's consent, and since the study will be conducted during working hours, you are indemnified by the eThekweni Electricity according to the Occupational Health and Safety Act, 1993 (Act No.85 of 1993), should any research related injury or adverse reaction occurs.

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

Please contact the researcher (tel no. 0725145903), my supervisor (tel no. 031-3736767) or the Institutional Research Ethics administrator on (031) 373 2375. Complaints can be reported to the Acting Director: Research and Postgraduate Support, Prof C E Napier on (031) 373 2577 or carinn@dut.ac.za



**CONSENT**

**Statement of Agreement to Participate in the Research Study:**

- I hereby confirm that I have been informed by the researcher, \_\_\_\_\_ (name of researcher), about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: \_\_\_\_\_,
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

_____	_____	_____	_____
<b>Full Name of Participant Thumbprint</b>	<b>Date</b>	<b>Time</b>	<b>Signature / Right</b>

I, \_\_\_\_\_ (name of researcher) herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

_____	_____	_____
<b>Full Name of Researcher</b>	<b>Date</b>	<b>Signature</b>

_____	_____	_____
<b>Full Name of Witness (If applicable)</b>	<b>Date</b>	<b>Signature</b>

_____	_____	_____
<b>Full Name of Legal Guardian (If applicable)</b>	<b>Date</b>	<b>Signature</b>

## ANNEXURE G: EDITOR'S REPORT

Sury Bisetty Academic Editing Services –



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To whom it may concern,

I have edited the dissertation entitled: *The Impact of Work Design on Job Satisfaction –A Case Study of the Electricity Stores Department, eThekweni Municipality* by Dhanesh Maniram, student number: 18850981 submitted in partial fulfilment of the requirements for the Qualification: Masters: Public Management in the Faculty: Management Sciences at the Durban University of Technology.

Professional Language and Technical Editor

14 March 2022

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#### CONTACT DETAILS

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Tel.: 031 7622 766

#### MEMBER OF:

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South African Council of Educators (222277)

South African Monitoring and Evaluation Association (761237008553)

#### CERTIFICATION:

PEGSA: Critical Reading

Editing Mastery: How to Edit to Perfection

Complete writing, editing master class.

ELSEVIER – Editor's guide to reviewing articles

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Disclaimer: Please note, I provided language and technical editing as per discussion with the client. The content of the dissertation was not amended in any way. The edited work described here may not be identical to that submitted. The author, at his/her sole discretion, has the prerogative to accept, delete, or change amendments/suggestions made by the editor before submission.

NB – IN KEEPING WITH POPIA REGULATIONS ALL WORK RELATED TO THIS REPORT WILL BE DELETED 3 MONTHS AFTER COMPLETION.

## ANNEXURE H: STATISTICIAN'S REPORT

Gill Hendry B.Sc. (Hons), M.Sc. (Wits), PhD (UKZN)  
Mathematical and Statistical Services

Cell: 083 300 9896  
Email: gillhendrystats@gmail.com

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18 May 2022

Re: Assistance with data analysis

Please be advised that I assisted Dhanesh Maniram (Student number 18850981), who is currently studying for a Masters: Public Management at DUT, with the statistical analysis of his data.

Yours sincerely

*Dr Gill Hendry*  
Private Consulting Statistician