Assessing level of compliance with Safety regulations in Dr JS Moroka Local Municipality

CT Thobejane

orcid.org/0000-0002-3360-3962

Mini-dissertation accepted in partial fulfilment of the requirements for the degree Masters of Business Administration at the North-West University

Supervisor: Prof JN Lekunze

Co-Supervisor: Dr TKP Saurombe

Graduation: June 2023

Student number: 26863197

DECLARATION REGARDING PLAGIARISM

Declaration regarding plagiarism

I (full names and surname):	**Collen Takane Thobejane**
Student number:	**26863197**

Declare the following:

1. I understand what plagiarism entails and I am aware of the University's policy in this regard;
2. I declare that this mini-dissertation is my own, original work. Where someone else's work was used (whether from a printed source, the Internet or any other source), due acknowledgement was given and reference made according to departmental requirements;
3. I did not copy and paste any information directly from an electronic source (e.g., a web page, electronic journal article or CD ROM) into this document;
4. I did not make use of another student's previous work and submitted it as my own; and
5. I did not allow and will not allow anyone to copy my work with the intention of presenting it as his/her own work.
6. I hereby confirm and declare that this study is my own work and that I have cited the sources from which I completed this project.

Signature

Date

DECLARATION

I, ……, declare that the mini-dissertation titled "**Assessing the level of compliance with safety regulations in the Dr JS Moroka Local Municipality, South Africa"** should be regarded and recognised as my own end results; wherein all sources stated have been specified and acknowledged in a way of proper referencing. Furthermore, i hereby pronounce that this mini-dissertation has not heretofore been submitted by me or any other person for academic motives at North-West University or any other institution of higher learning.

SIGNATURE **DATE**

ACKNOWLEDGEMENTS

I thank God, for his grace, and for guiding and protecting me during this long-lasting academic journey. I thank my supervisors, Prof JN Lekunze and Dr T Saurombe for their constructive direction and instructions throughout my study. I am indebted to my family, for their material, psychological and financial support during this scholastic enroute to success. Im very grateful for trusting in me.

I also wish to thank the former acting Accounting Officer for permitting me to conduct a study within the Dr JS Moroka Local Municipality, as well as all the employees of the Municipality for their cheerful and sincere encouragement and contribution to the victory of this study, especially those who took part during my data collection (survey). Your heartfelt contribution is highly notable, memorable, exceptional, special, extraordinary, renowned, distinguished, momentous, admired, noteworthy, remarkable, esteemed, etc.

A special thanks to my loyal and reliable friend who passed away on 5 May 2022, the late Mr Frank Jereki Malefo (April 1966 to May 2022). Thanks for the support, understanding and encouragement in my academic project (MBA). Ultimately, my gratitute and appreciation goes to anyone who assisted to peruse and provide encouraging feedback and beneficial criticisms to my study, be it friends, colleagues, academic advisors and/or classmates.

ABSTRACT

Concerns for safety in the work environment are on the rise, but often overlooked by management. In local municipalities across South Africa, staff's safety is guaranteed in terms of legislation, but the implementation of these legislations remains a challenge. Furthermore, employees at municipalities should be well vested with safety requirements in the workplace for compliance to be effective. However, this has not been happening in the Dr JS Moroka Local Municipality in South Africa. This study focused on assessing the level of compliance with safety regulations in a Local Municipality of South Africa. A descriptive research design was followed to explore the safety regulations and legislations associated with the municipality environment of South Africa. The population of this study includes all municipality workers stationed in multiple departments and sites of the Local Municipality. A total of 536 employees work for the Local Municipality, and a sample of 210 respondents was selected using a stratified probability random approach. Findings from the study show that municipality workers most exposed to environments in the execution of duties are those linked to wastewater and water treatment, maintenance of infrastructure, fire environment as well as roads and stormwater environments. The results also revealed that employees who work in these departments are exposed to higher risks compared to municipal administrators and they need to be constantly monitored, oriented and trained in terms of compliance with safety legislation. The study has also shown that challenges such as lack of safety equipment and lack of supervision affect compliance by employees with safety regulations at Municipality levels. The study, through its findings, recommends that municipal council and management should device strategies to enforce supervision and provide equipment in compliance with safety rules and legislation. The study concludes that municipalities must ensure that the constant monitoring and supervision of staff and the enforcement of compliance with safety regulations through education and continuous training of employees on occupational safety matters are pursued. Further research in this domain may investigate collaborative ways of implementing safety regulations in the workplace.

KEYWORDS

Safety regulations, compliance, Local Municipality, South Africa

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS AND ACRONYMS

Acronyms/abbreviations	Full meaning
ANOVA	Analysis Of Variance
BCEA	Basic Conditions of Employment Act
COGTA	Corporative Governance and Traditional Affairs
COIDA	Compensation for Occupational Injuries and Diseases Act
COVID-19	Coronavirus 2 (SARS-CoV-2)
DEL	Department of Employment and Labour
DOH	Department of Health
DRJSMLM	Dr JS Moroka Local Municipality
ESSA	Ergonomics Society of South Africa
HBA	Hazardous Biological Agents
HIRA	Hazard Identification and Risk Assessment
HFE	Human Factors and Ergonomics
H&S	Health & Safety
HR	Human Resources
HRM & D	Human Resources Management and Development
IDP	Integrated Development Plan
IEA	International Ergonomics Association
ILO	International Labour Organisation
IMATU	Independent Municipal and Allied Trade Union
ISO	International Organization for Standardization
KPA	Key Performance Areas
KPI	Key Performance Indicators
LRA	Labour Relations Act
MHSA	Mine Health and Safety Act
NDP	National Development Plan

NICD	National Institute for Communicable Diseases
NQF	National Qualifications Framework
NWU	North-West University
OHS	Occupational Health and Safety
OHSA	Occupational Health and Safety Act
OSH	Occupational Safety and Health
PEPMELT	People, Equipment, Process, Procedures/Practices, Material, Environment, Legal and liability and Finance
PPE and/or (PPC)	Personal Protective Equipment/Clothing
PsyCap	Psychological Capital
RBV	Resource-based View
RHBA	Regulations for Hazardous Biological Agents
ROD	Radiation Oncology Devices
RSA	Republic of South Africa
SALGA	South African Local Government Association
SALGBC	South African Local Government Bargaining Council
SAMWU	South African Municipal Workers Union
SCM	Supply Chain Management
SDF	Skills Development Facilitator
SPSS	Statistical Package for the Social Sciences
WHO	World Health Organisation

TABLE OF CONTENTS

CHAPTER 3: RESEARCH METHODOLOGY AND DATA ANALYSIS

CHAPTER 4: DATA INTERPRETATION AND RESULTS PRESENTATION

CHAPTER 1
OVERVIEW OF THE STUDY

1.1. Introduction

The purpose of this study was to assess the compliance level of safety regulations in the Dr JS Moroka Local Municipality (DRJSMLM) in the Republic of South Africa (RSA). Safety of employees in municipalities is an obligation that must be complied with by employers and employees at the workplace (Jonathan & Mbongo, 2016). In this study, safety relates to the physical condition in the workplace and applies to a situation or condition where the chances of harm and damage has been removed or reduced to a tolerable level (Khan, Mustaq & Tabassum, 2014). Risk means a likelihood or severity relating to danger that a worker and employer are facing in the execution of their daily activities. As such, lowering the likelihood and severity of exposure of employees and employers to danger increases safety in work place. Balderson (2016) argues that organisations should change from regarding or treating safety as an absence of negatives, such as no harmful accidents/incidents, but rather to regard it as the presence of capacity and capability to positively react to incidences that pose as risks in the workplace.

Dekker (2016) stated that, observing and implementing safety regulations in the work place save lives, increase productivity, and reduce costs. However, organisations may encounter numerous incidences that claim lives due to negligence, failure to abide to safety regulations and the risks posed by working in hazardous environments. This raises concerns whether such organisations comply with legislations on OHS in the workplace as set forth in the Constitution of the Republic of South Africa (International Labour Organisation [ILO], 2018). In addition to the Constitutional provisions, organisations are obliged to develop internal policies to enforce adherence so that the safety of employees is prioritised. Balderson (2016) alludes to the development of safety culture as an avenue for promoting occupational safety at the workplace.

This chapter covers the background of the study, the problem state the that emerged from gaps established in the study background, the research objectives and research questions, significance of the study, limitations and delimitations of the study, the conceptual framework, definitions of key terms and a chapter summary.

1.2. Background to the study

The safety of employees globally has an immediate and direct effect as it impacts on the socio-economic and work environment. In a World Health Organisation (WHO) report (WHO Report, 2018), it was indicated that the total loss of lives as a result of workplace illness and injuries globally are on the rise. This assertion was established by the International Labour Organisation's estimated of 1997, which found that about 4% to 5% of the global gross national product losses were consequential from work-related diseases and injuries, which impacted negatively on economies (ILO, 1997). Khan *et al.* (2014) also confirm that the rising cases of diseases and injuries is an indication of failures in the management strategies used by employers and employees at workplaces to manage safety. Karakhan and Gambatese (2017) add that the integration of occupational health and safety (OHS) into the workplace indicates the increasing importance of OHS compliance in work environments.

As such, steps to ensure safety in the working environment by the employer rely on the process of passing and validating OHS-related legislation and assessments (such risk assessment) of worksites or institutional facilities to ensure compliance the safety standards (Zondo, 2021). Although this approach has successfully revolutionised across the world, the implementation and monitoring of occupational safety standards in workplaces have delivered a less than expected impact in developing countries (WHO, 2018). The reason is that occupational safety is a multidimensional concept which it is not bothered only about the health, safety, and welfare of the employees involved at a particular workplace, but is also concerned with the safety culture within an organisation and the environment it operates in.

In South Africa, occupational safety is prioritised in various organisational spheres, including local government, and employees' safety in SA is guided by the Act titled: the Occupational Health and Safety Act (OHSA) 85 of 1993. The Act was promulgated into law in 1998 under the Republic of South Africa (RSA) Constitution (108 of 1998), underneath section 24, which calls for the "employer to provide and maintain as far as is reasonably practicable a working

environment that is safe and without risk to the safety of workers and to take such steps as may be reasonably practicable to eliminate or mitigate the hazard or potential hazard."

A study by Zondo (2021) found that organisations, including government agencies, such as local municipalities, fail to comply with the safety regulations as laid out in the legislative provisions. The failure to comply with legislative requirements does not solely depend on employers, but also on the employees who are expected and required to ensure that safety in the workplace is practised at all material times (Khan *et al.,* 2014). Bazan-Bulanda (2019) concurs that occupational safety is the liability of employer and employee by simply and fully complying with OHS legislations. However, ILO (2016) places the responsibility of safeguarding the safety of employees and other stakeholders on the management of the organisation, of which, in the case of municipal/local government, it is the municipal manager and/or his appointee in line with section 16(2) of the OHSA. In large organisations, special departments are responsible for developing internal safety regulations and policies, the implementation of the regulations and policies and the monitoring of these regulations and policies in conjunction with the department of human resource (Balderson, 2016). The achievement of optimum safety compliance is key in every working environment, and strict adherence to the rules and regulations without selective application is key, as reported by the South African Local Government Association (SALGA) (Mashamaite & Lethoko, 2018). The SALGA clearly specified that non-compliance with safety regulations and policies by any municipality may result in penalties, increased costs and ,in extremes cases, loss of lives.

Municipalities employ a significant number of people who work in risky environments such as engineering, waste removal, cleaning, security, water, sanitation and many other departments that are prone to risks. The risky nature of these departments increases the exposure of employees to risk on a daily basis as they provide services to communities they serve. The Integrated Development Plan (IDP) (IDP, 2021) of each municipality in South Africa must indicate strategies that strengthen the safety of employees is a core developmental thrust which needs regular attention. However, Mashamaite and Lethoko (2018) note that the persistence of safety issues at local municipalities is worrisome and an indication that health and safety regulations at municipality level are not being complied with on a daily basis.

These authors further argue that challenges to the implementation of safety regulations by municipalities include inadequate resource availability, bureaucracy, skills and capacity shortages, poor leadership, limited experience in local government management, political interference, corruption, poor coordination of partnerships as well as lack of coordination. Sepadi and Nkosi (2021), in they report, further pointed to the rising incidences of occupational health and safety failures in local municipalities. This has negatively impacted on service delivery of municipalities across the country and there is a need for research to assess the compliance level with safety regulations. As a result, this study was undertaken to assess the challenges associated with the non-compliance to safety regulations as it is regarded as one of the considerable and prime contributing factors to poor delivery of service in Dr JS Moroka Local Municipality in South Africa.

However, municipal management and employees are expected to work together to ensure that safety protocols are followed as regulated. In essence, it is not enough to institute safety measures and regulations as alluded to in the municipal Integrated Development Plan (IDP) without providing adequate training and education on safety to employees in all municipal facilities, worksites, and equipment. Safety must be cultured within the activities of every employee with the understanding that safety is a process to be complied with. As of 2021, the Dr JS Moroka Local Municipality employed about **536 employees,** and this is expected to increase with the filling of 26.35% of vacancies (IDP, 2020/2021). The municipality needs to improve its safety standards to attract competent employees who will assist in achieving efficient service delivery. In this study, the assessment will be about safety regulations' level of compliance with the hope of unearthing appropriate strategies to achieve a safe working environment for the DR JS Moroka Local Municipality's employees. Every employee of the organisation must be concerned with individual safety and the safety of co-workers (Zondo, 2021). This is contrary to real-world practices wherein the responsibilities of ensuring safety are placed on either the employer or employee.

1.3. Problem statement

Human resources are versatile resources to drive the mandate of equitable service delivery in local municipalities. Although this view is widely accepted, many organisations fail to realise that there is a need for management to protect all personnel working for their organisation (Jonathan & Mbogo, 2016). Karakhan and Gambatese (2017) argue that the increasing numbers of workplace injuries and illnesses serve as evidence to prove that while

legislations, regulations, policies, and acts pertaining to safety in the working environment exist, compliance and work standards are far from being enforced and implemented by the management of local municipalities.

Consequently, employees becomes vulnerable to various hazardous risks that require management to institute safety strategies (Zondo, 2021). This is because failure to protect employees from these risks has dire consequences such as avoidable deaths and loss of key employees including the legal cost of mitigating losses incurred. Jonathan and Mbogo (2016) point out that inadequate training on compliance to occupational health and safety measures has increased the risk of losses and detrimental situations. Zondo (2021) argues that, often, the lack of coordination between management and employees in ensuring safety at workplace, effectively complying with safety regulations as well as developing context-specific strategies for implementation are the problems that municipalities across South Africa are facing.

1.4. Research aims and objectives

The objective of this study was to assess the level of safety regulation compliance by employees of the Dr JS Moroka Local Municipality. The aim was accomplished by exploring these objectives as listed below:

- To analyse the nature of employees working at Dr JS Moroka Local Municipality.
- To assess the safety regulations applicable to employees at local government level in SA.
- To analyse the role and responsibility of stakeholders in discharging and execution safety regulations, precisely at the municipal level in South Africa.
- To analyse challenges experienced by stakeholders in the implementation of safety regulations at the municipalities in the country (RSA).

1.5. Research questions

The key question is: “What are the safety compliance regulation challenges faced by employees of Dr JS Moroka Local Municipality?”.

Based on the main study questions, below are the sub-questions developed to provide guidance to the study:

- What is the nature of employees working at Dr JS Moroka Local Municipality (DrJSMLM)?

- What are the safety regulations applicable to employees of local municipalities in South Africa?
- What role do stakeholders play in the implementation of safety regulations at the Local Municipality level in South Africa?
- Which challenges are faced by stakeholders in implementing safety regulations in the municipality (in these study case, it is DrJSMLM)?

1.6. Significance of the study

The focus was on establishing the level of compliance with safety regulations in Dr JS Moroka Local Municipality. Compliance with safety measures is pertinent, particularly in a changing working environment in both the government and private sector. While studies such as Zondo (2021) have attempted to uncover salient aspects of occupational safety at a car assembly in the private sector, little is known about non-compliance with safety in the public sector, particularly in local municipalities. Local municipalities are public entities that employ various skilled employees to work in very risky departments such as water, sewer systems, roads, mechanic, waste, environment, electricity and others. The safety of working in such environments is vital to improve service delivery.

Although occupational safety regulations are often spelled out in the management objectives, Belderson (2016) argues that compliance with such regulations is a subject yet to be explored. Results of this study are crucial to identify some of the sources of persistent rises in OHS incidences at municipalities. Furthermore, service delivery is a topical issue in SA's municipalities, as well as the safety of employees when discharging their duties always features in discussions of municipal failures to efficiently deliver services (Naidoo *et al.,* 2020). In this regard, this study plays an important role in pointing out a weakness that requires strengthening. Compliance with safety and regulations also relies on the degree of competency of both managers and employees. Assessing the extent of compliance helps to pave way for ushering context-based strategies for orientating municipal employees and managers about the importance of maintaining a safety culture in their organisation. In fact, employers should see the need to invest in training, education and awareness of their employees on safety at work (Loosemore & Malouf, 2019).

Therefore, this is an important study that can be used as a reference for decision-making. Occupational safety is a cross-cutting discipline in an organisation, and therefore a study

that interrogates compliance with safety regulations helps to promote the coordination and collaboration of functional areas in pursuit of a safer working environment (Tymvious & Gambatese, 2016). Studies on compliance with safety regulations are limited, particularly in the public sector, and therefore this study may encourage other researchers to further investigate this domain and develop better safety mechanisms, which can be used to promote compliance with safety measures in the municipal work environment in local municipalities in developing countries

1.7. Delimitation

Geographically, the focal point was on the compliance with safety regulations within the Local Municipality (DrJSMLM), which is in the Nkangala District Municipality in the Mpumalanga Province, RSA. The target population to this study were municipal employees at all levels in different departments of the municipality in question. The respondents of this study were selected from a group of OHS officers, management, ohs committee reps, assistant manager, technicians, pump operators, plant operator, water tankers, and general workers. However, safety is a cross-cutting discipline, which should involve every member of the municipality. Limiting the number of study respondents was mainly influenced by time and financial resources as well as the methodology employed in this study. In this regard, a representative sample was selected to ascertain that the results are a true outcome of the actual experiences of the targeted population

1.8. Limitations

Data was collected during the last quarter of 2021 when there were relaxed lockdown regulations due to Coronavirus 2 (SARS-CoV-2) (COVID-19), which restricted movement of people due to the national disaster management regulations in place. This limitation was overcome by using modern technology to facilitate data collection such as Google Forms, which allows respondents to respond to questions without physical conduct. The questionnaire was uploaded on Google Forms and shared with respondents through email and WhatsApp.

The respondents were given ample time to respond and those who did not understand some questions were patiently engaged through telephone. Another limitation was financial and time constraints since the data was cross-sectional. However, a representative sample was drawn using a stratified random process, which aimed to establish that every member of the

targeted people had an unbiased, fair and just opportunity to be selected.

1.9. Theoretical & conceptual design

There are basically two underlying theoretical frameworks that guide this study. Therefore, the Heinrich's domino theory and the resource-based view, which were combined to develop a solid conceptual framework that provided the foundation for carrying out this study.

1.9.1. Heinrich's domino theory

The domino theory of accident causation was propounded by HW Heinrich in the 1930s (Busch, 2021). The model has five dominoes: fault of a person, accidents, ancestry and social environment, unsafe act and/or mechanical or physical hazard, and injury (Mat *et al.,* 2021). The theory signal accidents as foreseeable consecutive succession of incidents. Every causal aspect creates on the ramifications of the others. Moreover, the theory point up that 88% of occupational accidents and/or incidents are as a result of unsafe acts of a human being, 10% by unsafe working conditions and 2% by the happening and circumstance of natural causes (Mat *et al.,* 2021). Heinrich's domino theory states that management practices are the causes of safety-related accidents/incidents in the workplace (Fenstad, Dahl & Kongsvik, 2016). Heretofore, the theory was justified by Bird and Loftus (1976) to recreate and reproduce the managerial systems or interrelation in series of accident causes, as defined by Heinrich (Leck & Sirota, 2019). This theory points to the accountability of management to guarantee the safety and conducive workplace for the purpose of the safety and wellbeing of the employees, and this will be a remedy and prevention of contact incidents.

1.9.2. Resource-based view (RBV)

The RBV ideology clarify the degree to which an organisation may be capable to maintain and sustain a favourable and a superior business position. Barney (1991) argues that firms with resources that are rare, valuable, inimitable, and non-substitutable, will be able to gain sustainable competitive advantage. The most valuable resource is human capital. Therefore, the RBV serves safety management by focusing on the role of human capital in strategic planning and safety management practices (Upadhyay *et al.,* 2020). Additionally, the RBV stimulates safety management practices in the workplace and their consequences on organisational resources (Kornelius, 2018). 'Best employer studies' are regarded as

studies that squarely focus on organisational success and human capital investment (Mat *et al.,* 2021). The studies in question bring out an RBV of an organisation as their theoretical background. In this theory, an institution's capabilities determine its potential to achieve its goals as well as extent of success in applying and maintain them (Upadhyay *et al.,* 2020). The notion to manage safety is utilised to analyse level of compliance with safety regulations at the municipality in question for the purpose of this study.

1.9.3. Conceptual framework

Heinrich's theory and resource-based view guided the conceptual framework of this study, wherein they consider that safety is a widely interconnected concept. However, there are major aspects on which compliance with safety regulations are premised, such as legislation and employer initiatives on safety and employees' participation in safety. The interaction of these constructs results in the compliance or non-compliance to safety at a workplace. The figure below shows the conceptual framework adopted for this study:

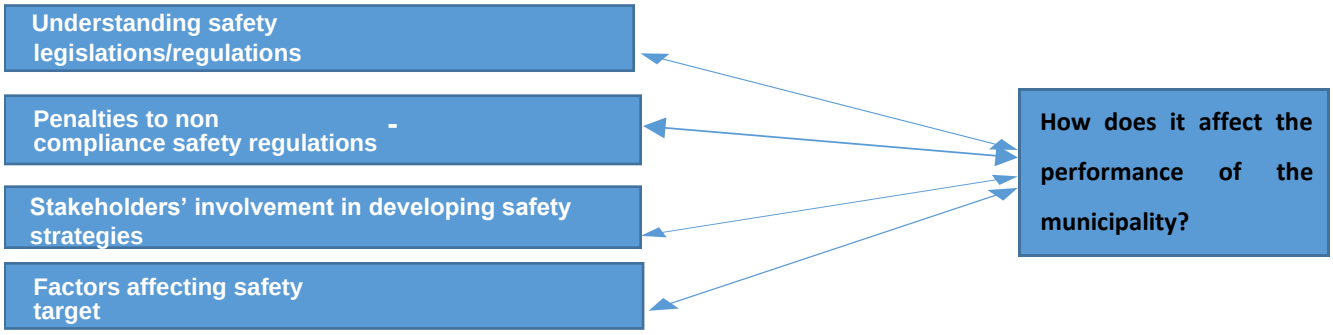


Figure 1.1: Conceptual framework (Source: Researcher's own data)

The legislation of safety regulations is the constitutional mandate from government and it is known nationally and globally. In this regard, several rules and regulations have been promulgated for employers to comply with. The legislations guiding safety in the workplace include the RSA Constitution (108 of 1998), Occupational Health and Safety Act (OHSA) (85 of 1993), Compensation for Occupational Injuries and Diseases Act (COIDA) (130 of 1993), Hazardous Chemical Substances Regulations (GN 1179 of 1995), National Environment Management Act (107 of 1998), Water Services Act (108 of 1997), Water Services Amendment Act (30 of 2004), Occupational Safety and Health Convention (155 of 1981), Protocol and the Promotional Framework for Occupational Safety and Health Convention (187 of 2006), Reviewed Dr JS Moroka Local Municipal OHS Policy (2021) and all other IOL safety conventions.

The safety department/unit of every Local Municipality must ensure that the rules and regulations stated are understood, interpreted, and enforced to attain a safe working environment. The unit responsible for safety in municipalities also sets context guidelines that are aligned with the regulations and ensure that such guidelines are adhered to (Reviewed Dr JS Moroka Local Municipal OHS Policy, 2021) by all municipal stakeholders. However, crafting context-based guidelines is not an end to safety implementations; employees should also form part of the promulgation, enforcement, fulfilment and keeping track and tabs on safety-related legislation. Kartikawati and Djunaidi (2018) reiterate that the occupational health and safety (OHS) system should be an organisational top priority with a bid to preserve the safety of all municipal employees, councillors and stakeholders. In South Africa, it is obligatory to ascertain that workers are continuously conversant with safety measures through training, workshops, etc.

Employees and other stakeholders such as the surrounding communities are important actors in the attainment of safety and the responsibility of the municipality is to render a service to the community it serves. Employees are contracted to discharge duties at the Local Municipality, which is service delivery. As they perform such duties, safety is the most important aspect that should be observed at all the times. In most cases, an OHS officer(s), safety representatives, supervisors, and management should always monitor the activities of employees to promote safety in the working environment. The safety of employees is vital because it directly affects service delivery; for example, when an employee is injured at work, the cost of medical expenses, replacing the injured employee and the stoppage of essential services, particularly when the job requires specialised skills, translate to poor service delivery. Some events such as the bursting of sewer systems affect the surrounding communities and the safety of such stakeholders is threatened. The factors that affect safety are overarching and these can be internal factors that are from inside (within) the municipality, such as non-compliance with safety regulations, which can be caused by negligence or a lack of appropriate supervision and external factors, which include hazardous events that are outside the control of municipal employees, usually referred to as natural disasters. The occurrence of such events may compel the municipality to relax or strengthen some safety measures, with the aim to find quick safety measures that enable all stakeholders to cope with the disaster and revert to normal service delivery practices. All the above-mentioned areas of safety management affect compliance with service delivery.

1.10. Definition of key terms

The below defined key terms are meant to enable the reader to comprehend the context within which they are used:

1.10.1. **Safety** means a situation or circumstance of being preserved against unlikely physical, social, spiritual, financial, political, emotional, occupational, psychological, educational, or other types or consequences of failure, damage, error, accidents, harm (Antonsen, 2017). In this study, it is defined to be the control of recognised hazards to achieve an acceptable level of risk. A municipal work environment requires safety measures to be in place because most of the tasks involve a great deal of risk that managers, supervisors and employees, in general, ignore (Reviewed Dr JS Moroka Local Municipal OHS Policy, 2021).

1.10.2. **Health** is the condition of being at liberty from illness or injury, which could be mentally, physically or otherwise. It is the general condition of a person's mind, body and spirit, usually meaning to be free from illness, injury or pain. The WHO (2016) defined health in its broader sense as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity."

1.10.3. **Occupational Health and Safety:** As regulated by the Occupational Health and Safety Act (OHSA), it is a cross-disciplinary discipline concerned with safeguarding the safety, health and welfare of employees at work (Zondo, 2021).

1.10.4. **A hazard** is a condition that has the potential to dangerously hinder or obstruct the expected, orderly progress of an activity (WHO, 2016). Hazards may be negligible when they will not result in injury to people or serious damage to equipment; marginal when they can be controlled to prevent injury or damage; and can be critical when they will cause injury or serious damage or both; and catastrophic where they will cause death to workers. In this study, the operational definition was adopted as it applies to the study.

1.10.5. **Safety compliance** means the act of being within the parameter of well-established standards and regulations relating to occupational safety. Compliance with safety standards is regulated by safety compliance organisations, which is inclusive of local government/municipality. The study cascaded compliance from the highest decision-making bodies to the general workforce (from top management to employees at the cold-face of service delivery/lower levels). Every member of the municipality is jointly responsible for compliance with the safety rules and regulations as enshrine in OHSA.

1.11. Summary

This introductory chapter contains a brief introduction, the background to the level of compliance with safety regulations in general, but melting it down to the targeted area of study. The problem statement establishes the knowledge gap as well as the challenges of compliance with safety regulations at the Local Municipality. The research objectives and questions are pulled from the problem statement as outlined above. The chapter further presents the theoretical framework that guided the conceptual design. Limitations relating to the study were also explained as well as the methods that were used to alleviate and mitigate the limitations. The delimitations focused on scoping the study and contextualising this study. The key terminologies used in this study were clearly defined in other to contextualise the study within the domain of OHS. The succeeding chapter (chapter two) covers literature extensively with regard to compliance with safety regulations.

CHAPTER 2

LITERATURE REVIEW

2.1. Introduction

This chapter is a review of literature on the level of compliance with safety regulations; the process involves consulting numerous sources and references of data such as peer-reviewed publications, government reports, books and policy reviews on occupational safety. The main intention of this chapter is to explore the occupational safety discourse and identify knowledge gaps. An inverted pyramid approach begins with global perspectives, melting it down to the study area that was used in the review of literature. Safety of employees is a national and global issue that is regulated by the national legislations, ILO and other organisations, such as the Department of Health, Employment and Labour and etc. Non-compliance with safety regulations at global level is a concern and the situation is worst at local government level. As such, the need arises for a research study to understand the causes of, and ways to manage the negative effects in the work environment brought about by the rising concerns with safety. The Constitution of the Republic of South Africa (RSA) (1996) proclaims that personal safety in the workplace is a requisite act to improve quality of life, human development, increase productivity and/or delivery of service, hence it is regarded as a human right (National Development Plan 2030, 2013; Fourie, 2018).

2.2. The global perspective on occupational safety

Globally, regulatory agencies such as the World Health Organisation (WHO) and International Labour Organisation (ILO) are faced with a daunting task of ensuring that employer organisations adhere with safety standards. The National Safety Council (2008) of South Africa notes that some of the important organisational strategies that can help transform images as well as maintaining competitive advantage of organisations include re-aligning with intentional safety standards. Phusavat *et al.* (2017) opined that, in order for the organisation to meet international standards, it should establish an effective safety management systems. However, the increasing complexity in workplaces, the increases in accidents and the speed in which technology is evolving have rendered risk management in the workplace a resolute, professional and strategic response issue to ensure a healthy and safe working environment (Phusavat *et al.,* 2017).

Furthermore, an ILO (2018) report indicates that many employees and stakeholders in different working environments fall victim to workplace harmful incidents, develop serious health complications or accidents yearly due to poor management of safety, and the numbers are on the rise. This trend is substantiated by data that shows that, in 2016, in Kuwait, more than 51 500 work-related accidents were recorded each year, causing a social safety bill of more than 29 billion dinars (or US$94.83 billion), against 20 billion dinars (or US$65 billion) for 2014, explained Zondo (2021).

Moreover, the ever-increasing expenditures depict considerable gaps in the management of occupational safety, which end up draining the national budget. Khan *et al.* (2019) argue that besides loss of salary and wages, loss of equipment and overtime work, costs due to downtime, number of deaths associated with personal injury, as well as disability caused by workplace accidents are enormous. The National Safety Council (2008) reiterates that fatalities caused by industrial accidents are ranked third due to vehicle accidents and homicide.

In the United States of America (USA), statistics show that, per year, there are nine million death cases together with disabling injuries as well as 6 500 fatalities (Zondo, 2021). Phusavat *et al.* (2017) indicate that the figures are much higher in the United Kingdom (UK), where 27 million non-fatal accidents and 1.6 million fatal accidents are recorded on an annual basis. An estimated number of 862 500 occupational accidents, which include 1 597 fatalities, were registered in France in 2000 alone (Conchie & Donald, 2009). The occurrence of occupational injuries is deplorable, and this is as a result of non-compliance with safety regulations, which is a big challenge in many countries.

A study by India, Bonini and Gorner (2011) found that there was a 1.25 person, per 100 employees on overall injury rate on a yearly basis in Europe. In Latin America and the Caribbean region, there are as many as 13.5 persons per 100 000; 34 persons per 100 000 workers in the Republic of Korea, and 140 persons per 1 000 in Iran who report accidents annually (Tharaldsen *et al.,* 2008). Surprisingly, the attention to safety in the workplace is the responsibility of governments of many countries and not the individuals and employers

However, efforts are being made globally to improve safety as the National Institute of Occupational Health and Safety in the USA is committed to active programmes relating to research surveillance, prevention interventions, information dissemination and health and safety professional education in a bid to curb occupational-related illness, injury, disability

and death (National Safety Council, 2008). There are other agencies with similar health and safety responsibilities, such as the European Agency for Safety and Health at Work, European Network for Workplace Health Promotion, Health and Safety Executive, Occupational Safety and Health Administration, American National Standard Institute and Royal Society for Prevention of Accidents (Zondo, 2021). Furthermore, institutions such as small business services, chambers of commerce, learning and skills councils, trade and professional associations, health and safety consultants and good neighbours contribute positively to the provision of health and safety information, advice and training courses to workplaces (Jonathan & Mbogo, 2016).

Although large numbers of global safety enforcement agencies are working hard to improve safety at all material times, it was discovered that hazardous conditions in workplaces are still prevalent and cannot be postponed (Park *et al.,* 2017). Jonathan and Mbogo (2016) associate the upsurge of occupational accidents with communication gaps between agencies and employers in various working environments. It appears to be a tasking exercise to encourage employers to invest in their own employees through developing and implementing safety management programmes, but they must do this if they want to improve workplace safety. This also cannot be done without increasing the cost of doing business, because employers often resist complying with safety regulations.

2.3. Occupational safety in Sub-Saharan Africa

On the continent, occupational safety is one of the major crises that significantly contributes to loss of lives, permanent disability, and loss of valuable equipment. The ILO, together with other organisations, has instituted several regulations to guide employers when implementing safety measures in the workplace. However, a study in Ghana shows that many companies struggle to adhere with such regulations. Nyantakyi *et al.* (2020) note that the most affected are municipal construction workers who work in hazardous environments without appropriate personal protective equipment (PPE), technical guidance, training, and safety knowledge. In fact, Osei-Asibey *et al.* (2021) argue that, in Ghana, it was recorded that there are many accidents that cause employees to lose their lives, and these happen mostly on construction sites, wherein some ended up becoming physically handicapped as a result. However, Kretchy *et al.* (2019) reiterate that the chief constituent and component of safety in the workplace should be to comply fully with safety-related legislations that are aimed at protecting workers.

Kamau *et al.* (2017) note that the shortage of effective and reliable safety measures in the Thika Municipality in Kenya and the unwillingness to enforce the safety laws by the responsible institutions have contributed negatively and heavily to non-adherence to occupational safety legislations, and this resulted in an increased risk of municipal workers' injuries and death. Tavakoli *et al.* (2020) argue that employers are reluctant to use modern technologies to reduce the incidence of workplace injuries, which raises major concerns. Technology reduces the risk of injuries because it involves less human interaction with dangerous tools and chemicals (Schall *et al.,* 2018). Padidar *et al.* (2021) suggest that lessons for non-compliance can be obtained from the recent COVID-19 regulations, wherein compliance with safety regulations was emphasised.

Nghitanwa and Zungu (2017) indicate that poor mechanisms to control hazards and to prevent hazard exposures are prevalent in Namibia's local municipalities. In Zimbabwe, recent studies on occupational safety focus on fuel stations (Chibwe *et al.,* 2022), and the motor industry (Mkungunugwa *et al.,* 2022), with little attention on the safety of municipal employees. However, Chigwata *et al.* (2017) argue that the management complexities embedded in the local government structures contribute to non-compliance with safety regulations in Zimbabwe. Compliance with safety regulations in South Africa's local municipalities is mostly affected by management style and operations, as any lack of directives from above concerning safety of employees leads to negligence and ultimately non-compliance.

2.4. The state of occupational safety in South Africa

Most studies in this domain and on safety-related topics centred on the behavioural part of the employees and the working environment, and also look at issues such as health hazards, employee assistance programmes, OHS-related policies, equity in the workplace, etc. (Kamau *et al.,* 2017). In South Africa, studies on workplaces are mostly focused on addressing petty issues, while overlooking the most important one about compliance to save lives, as studies that focus on workers' safety are rare (Sibonde & Dassah, 2021).

As such, municipal workers such as employee in other industries in South Africa need safety in the workplace. Sibonde and Dassah (2021) emphasise that safety is hygienic factors that enhance service delivery. Resultantly, it is essential to assess the level of compliance with safety-related regulations in a workplace.

Sfantou *et al.* (2017) reiterate that employees' perspectives relating to workplace safety are often disregarded due to various factors such as frequent changes of management, management styles and, in most instances, safety regulations are just neglected or breached until the worst case scenario plays out. In such scenarios, workers are left with no option than to stand and demand safety at their workplaces because when they fall victim to occupational ill-health or injury, the compensation from the employer and/or Compensation Fund (DEL) does not match their needs (Jonathan & Mbogo, 2016). Although the working environment requires due diligence in terms of safety of employees, it is argued that many employees often compromise their safety to please managers (Fasterling, 2017).

In many industries, the safety of employees is outsourced to occupational professionals, such as industrial hygienists, academics, and industrial managers, which could have been done in-house/internally. An earlier study by Bennet (2002) shows the focus of safety management as organised aspiration in point form to be met by management as envisaged goals. In this study, it was further argued that the management team is always silent when it comes to issues or matters regarding the safety of employees in the workplace. While attempts are made to portray safety as a standalone functional area in many working environments, safety is an over-arching discipline that is needed by both management/employers and employees. Some companies place the safety function under human resources (HR), but there are still existing gaps because safety melts down to the everyday working environment in every department/unit. The responsibility should be allocated to every employee of the organisation. Therefore, it is very important for employers to comply by appointing health and safety representatives as per sec 17 of the OHSA (85 of 1993). Pescud *et al.* (2015) point out that the persistence of unsafe working conditions in South Africa reflects the unwillingness of employers to comply with the safety regulations.

Senso (2017) notes the danger of an employee who is doing routine work with daily targets, wherein he/she is expected to reach a certain set or expected level or number, while his safety is not taken into account as well as a lack of consideration regarding trauma, pressure and tensity, which could unfavourably affect the functioning and performance of the institution (in this case, the municipality). As a result, the exposure without taking appropriate safety measures increases the risk of workplace injuries. Negligence of safety issues by employers can be attributed to the fact that the International Organization for Standardization standards is too reactional in nature, and not proactive (Laursen *et al.,* 2019). Tymvios and Gambatese (2016) have asserted that safety experts and law enforcers

are simply concerned about disability management, auditors, workplace inspection and insurance matters rather than installing proactive safety programmes for workers. Safety priority in the workplace is important, such as other issues such as delivery of basic services, which is a case for the government and/or municipality.

2.5. Occupational safety as a human right

The right to safe working conditions is part of the broader right of everyone to the enjoyment of just and favourable working conditions, as stipulated under article 23 of the Universal Declaration of Human Rights and article 7 of the International Covenant on Economic, Social and Cultural Rights (Tshoose, 2015). The Universal Declaration of Human Rights states that *"everyone is entitled to the right to work, to free choice of employment, to just and favourable conditions of work and to protection against unemployment".* Sections 11 and 24 of the Constitution of the RSA also mention rights to safety as a fundamental requirement for human dignity and wellbeing (RSA Constitution, 1996).

2.6. ILO conventions ratified by South Africa

ILO has conventions and recommendations that are legitimate tools in order to set forward the basic principles, as well as the work rights drawn by all stakeholders concerned (De Stefano & Aloisi, 2019). Every member state of the international treaties is expected to ratify the conventions and adhere to them. On the other hand, the ILO may issue recommendations, but they are not legally binding. In 1919, South Africa became a member, and in 1966, RSA parted with the ILO, due to the state of the government's apartheid laws (Bernards, 2017). RSA reinstated its membership on 26 May 1994 after the democratic election. The ILO Convention 187 defines the significance of the development of a country's profile, while furnishing guidelines on the formation of OHS systems. RSA is determine, dedicated and committed to a decent future and work agenda for its citizens and/or workers. South Africa form part of United Nations (UN) 187 members states.

Convention C187, which is about the Promotion Framework for Occupational Safety and Health Convention, 2006 (No. 187) 2 was adopted and approved by ILO on 31 May, 2006, which came into enforcement and effect in 2009. RSA did not ratify the convention (C187) yet, even though it is one of the 49 members. A signatory member country is obliged to adhere to the framework and obligatory elements of OSH system as the convention provides.

Thus far, South Africa has given formal consent to 27 ILO conventions, in which 24 conventions were regarded as forceful. Since the years of ratification, the country has never publicly declared or overridden any of the 27 conventions that have been given formal consent to thus far. South Africa has not ratified the 58 ILO conventions thus far, which include two governance (priority) and 56 technical conventions. However, there is the possibility of ratifying ILO Convention No. 161, as it is being considered by the Department of Employment and Labour [DEL], such as other 79% of the countries that had already ratified it (Rantanen *et al.,* 2017).

2.7. Occupational Safety and the Environment related Acts

The Constitution of RSA consists of several frameworks for occupational safety, such as pieces of legislations that are targeted at addressing specific areas of workers' welfare. The subsequent sections outline each legislative instrument and its application to occupational safety:

2.7.1. RSA Constitution, No. 108 of 1996

Sec 11 of the constitution is about the right to life, while sec 24, which is titled: Environment, guaranteed to every citizen that they have the right; "*(a) to an environment that is not harmful to their health or well-being; and (b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that:*

(i) prevent pollution and ecological degradation;

(ii) promote conservation; and

(iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development".

Sec 152: Objects of local government, sub sec (1) affirms that the purpose and responsibility of the municipalities are "*(c) to promote social and economic development and (d) to promote a safe and healthy environment"*.

2.7.2. Occupational Health and Safety Act (OHSA), No. 85 of 1993 as amended under Act No. 181 of 1993

OHSA, No. 181 of 1993, as amended, aims to positively contribute for the occupational health and safety of employees and for the health and safety of any persons in interconnection with the use of plant and machinery; the protection of persons other than

persons at work against hazards to safety arising out of or in connection with the activities of persons at work; to establish an advisory council for occupational health and safety; and to provide for matters connected therewith.

Section 8, which is titled *General duties of employers to their employees* states under sub-section 1, that the employer is responsible to provide and maintain, as far as is reasonably practicable, a working condition that is safe and without risk to the health and safety of his employees and the stakeholders. Sub-section 2 of the same section states that by not deviating from the generality of an employer's obligations and roles under sub-section 1 of the same section, the subject to which those obligations and roles mentioned include specifically-

a) a provision and maintenance of systems of work, plant and machinery that, as far as is reasonably practicable, are safe and without risks to health,

b) taking such steps as may be reasonably practicable to eliminate or mitigate any hazard or potential hazard to the safety of employees, before resorting to personal protective equipment;

c) making arrangements for ensuring, as far as is reasonably practicable, the safety and absence of risks to health in connection with the production, processing, use, handling, storage or transport of articles or substances;

d) establishing, as far as is reasonably practicable, what hazards to the health and safety or persons are attached to any work which is performed, any article or substance which is produced, processed, used, handled, stored or transported and any plant or machinery which is used in his business, and he shall as far as is reasonably practicable, further establish what precautionary measures should be taken with respect to such work, article, substance, plant and machinery in order to protect the health and safety of persons, and he shall provide the necessary means to apply such precautionary measures;

e) providing such information, instructions, training and supervision as may be necessary to ensure, as far as is reasonably practicable, the health and safety at work of his employees;

f) as far as is reasonably practicable, not permitting any employee to do any work or to produce, process, use, handle, store or transport any article or substance or to operate any plant or machinery, unless the precautionary measures

contemplated in paragraphs (b) and (d), or any other precautionary measures which may be prescribed, have been taken;

g) taking all necessary measures to ensure that the requirements of this Act are complied with by every person in his employment or on premises under his control where plant or machinery is used;

h) enforcing such measures as may be necessary in the interest of health and safety;

i) ensuring that work is performed and that plant or machinery is used under the general supervision of a person trained to understand the hazards associated with it and who have the authority to ensure that precautionary measures taken by the employer are implemented; and

j) causing all employees to be informed regarding the scope of their authority as contemplated in section 37(1)(b).

Under section 9, which is general duties of employers and self-employed persons other than their employees states "(1) *Every employer shall conduct his undertaking in such a manner as to ensure, as far as reasonably practicable, that persons other than those in his employment who may be directly affected by his activities are not thereby exposed to hazards to their health or safety, (2) Every self-employed person shall conduct his undertaking in such a manner as to ensure, as far as is reasonable practicable, that he and other persons who may be directly affected by his activities are not thereby exposed to hazards to their health and safety".* OHSA also features the duties and responsibilities of employee under sec 14, together with the functions of H&S representatives and committees under sec 18 and 20, respectively.

South Africa introduced the Occupational Safety and Health Bill in SA (International Organization for Standardization (ISO) 45001, 2018), wherein we saw the new Bill on OHS in 2020, which introduced the provisions that give power to employees to withdraw themselves immediately they suspect that the workplace is not conducive and it is life threatening without being victimised by the employer. The bill is yet to be incorporated in the OHSA.

ISO 45001 has the expertise of ISO 14001, 9001, etc., and it is confined to OHSAS 18001, with additional upgrades to be considered. The International Organization for Standardization (ISO) system guarantees a proactive and futuristic approach is in place as

it needs hazards and risks to be estimated, evaluated, assessed and corrected before they cause accidents and injuries. OHSAS 18001 guides on the requirements for an OHS management system and its standard has a number of requirements that include the following but are not limited to: checking and corrective actions; risk assessment and risk control; institutional OHS policy; planning for hazard identification; implementation and operation; training and development, legal and other requirements; continual improvement; objectives; OHS management programme; and others.

Lastly, according to section 38 (2) of the OHSA (1993), states that "*any employer who does or omits to do an act, thereby causing any person to be injured at a workplace, or, in the case of a person employed by him, to be injured at any place in the course of his employment, or any user who does or omits to do an act in connection with the use of plant or machinery, thereby causing any person to be injured, shall be guilty of an offence if that employer or user, as the case may be, would in respect of that act or omission have been guilty of the offence of culpable homicide had that act or omission caused the death of the said person, irrespective of whether or not the injury could have led to the death of such person, and on conviction of liable to a fine* ***not exceeding R100 000.00 or to imprisonment*** *for a period* ***not exceeding two years or to both such fine and imprisonment"***. Sub-sec (3) proclaims that whenever a person is convicted of an offence consisting of a failure to comply with a provision of this Act or of any direction or notice issued thereunder, the court convicting him may, in addition to any punishment imposed on him in respect of that offence, issue an order requiring him to comply with the said provision within a period determined by the court, while sub-sec (4) contends that whenever an employer is convicted of an offence consisting of a contravention of a provision of section 23, the court convicting him shall inquire into and determine the account which, contrary to the said provision, was deducted from the remuneration of the employee concerned or recovered from him and shall the act with respect to the said amount mutatis mutandis in accordance with section 28 and 29 of the Basic Conditions of Employment Act, 1983 (Act No. 3 of 1983), as if such amount is an amount underpaid within the meaning of those sections.

2.7.3. Compensation for Occupational Injuries and Diseases Act (COIDA), No. 130 of 1993

The Act, as amended, aims to: "Provide for compensation for disablement caused by occupational injuries or diseases contracted by employees in the course of their

employment, and for death from such". Compensation for Occupational Injuries and Diseases Act (COIDA) conforms to the ILO Convention of 1964 (No. 121).

In relation to employment injury benefits, this act provides for a "No Fault Claim". Chapter IV covers the rights of an employee to be compensated should he/she suffer any occupational injury or disease in the workplace and also the acceptable conditions for compensation, while Chapter V regulates the procedural aspects to claims. The establishment and calculation of the compensation featured under Chapter VI, wherein occupational diseases are part of Chapter VII, and Chapter IX tables and details the commitment of the organisation/employer. The act also set out the injuries and diseases that are compensable, in line with Schedule 2 and 3, respectively. Ultimately, the key purpose of this act provides support between employer and employee, by ensuring that during a dreadful occupational disease and injury, the employer can still take good care of its employees.

2.7.4. Basic Conditions of Employment Act (BCEA), No. 75 of 1997, as amended

As amended, Chapter 2 of this act focuses on the working hours, which the employer should comply with, irrespective of a working day (Monday to Sunday), of which the safety of employees should be prioritised at all the time in line with section 7. The Act regulates the obligatory responsibilities of the employer relating to night-shift and pregnant employees, as the employees should not be negatively affected health- and safety wise by the arranged employers' working time(s)/hours. Furthermore, in relation to night work in a municipality in SA, the responsibility is granted to Provincial South Africa Local Government Bargaining Councils (SALGBC). In a case in the Mpumalanga Province, night work allowance is under clause 8 of the Collective Agreement of Conditions of Services for Mpumalanga Divisions, 2018. Night work refers to work between 18:00 and 06:00, wherein the Act cooperates with the application of OHSA and other related legislations, which include the basic right of employees to work or working in a hazardous and or similar working environment to be subjected to medical surveillance prior to, during and after employment wherein the expense is borne by the employer in line with BCEA and/or LRA, as well as collective agreement issued by the SALGBC.

It is not imperative for employees to work night shift, as the employer is obliged to bring forth one or more optional day(s) for employees who cannot manage or survive to work at night.

The rights of the mother and the unborn baby are protected under section 26, as the employer should never allow pregnant women to work in a hazardous conditions due to the reasons health and safety of the unborn baby. From 16 to 20 May 2022, South Africa hosted a Fifth Global Conference aimed at the Elimination of Child Labour in Durban, which is as per section 43 (1) of the BCEA and ILO, with a aim to ensure that the globe is free from employing children under the age of 15.

2.7.5. Labour Relations Act (LRA), Act No. 66 of 1995

The objective of LRA is to promote labour peace between the employer and employee, by also ensuring that employee and/or employee representative(s) become part of the decision-making process as per sec 23 of the RSA Constitution. Consultation as one of Batho Pele principles also applies under LRA as per section 84, which regulates that the employer should consult with employees or employee representatives before taking decisions on issues of mutual interest. In a case of a municipality, there are structures such as local labour forums, wherein the municipal management represents the employer together with union representatives. The South African Municipal Workers Union (SAMWU) and The Independent Municipal and Allied Trade Union (IMATU) converge to engage on local issues of mutual interest, and National and Provincial SALGBC, where the employer, which is SALGA, represents all municipalities and municipal entities in SA to converge with the two mentioned above to discuss issues of mutual interest at the national (central) and/or provincial(divisional) level, which OHSA is considered at all the times.

2.7.6. Employment Equity Act (EEA), No. 55 of 1998

The EEA aim to fight any form of discrimination in the workplace on one or more reasons or conditions such as political opinion, culture, language, birth, pregnancy, marital status, conscience, sexual orientation, age, race, belief, family responsibility, religion, HIV status, ethnic or social origin, colour, gender, or disability.

Although legislative frameworks are available with substantial amendments being made, the issue of safety at work still boils down to the injured or the person a exposed to hazardous working environments. It is significant to record that safety cautionary or pre-cautionary in the workplace is not solely for shopfloor or lower level workers, but management's safety is also crucial.

Kartikawati and Djunaidi (2018) posit that it is critical for management to plays their role in making sure that the attitude of employees towards safety in the workplace is in line with legislation and internal organisational policies. Proper and regular supervision relating to OHS is key in ensuring uncompromised compliance with applicable legislations. Yazdani *et al.* (2015) argue regarding the comparison of the role of management and workers regarding workplace safety as it ultimately requires a joint force to ensure that lives and the environment are saved. Ibrahim *et al.* (2016) dispute the notion that every employee in the workplace is always vigilant and careful to prevent and prohibit workplace-related injuries. Zondo (2021) reiterates that the global statistics on workplace injuries show that even though many national and international organisations, such as ILO, promulgate legislation to guide workable practices, processes and procedures to ensure safety in the workplace, the work standards that are part of the standard operating procedure are not approved and implemented.

Mullins *et al.* (2019) caution that the perception that is dominating the work space, which suggests that employees are on their own and should take responsibility for their own safety, is consequential to management laissez-faire approach towards the employer's role in OHS. Mhlanga *et al.* (2021) indicate that while it is improbable that management would propose to their employees that they overlook and undermine safety protocols, there are high chances of managers ignoring safety concerns. In order for the organisation to develop and nurture its safety culture, it should be guided by its past historical experience as well as its internal workplace context.

Management should be exemplary and set the tone on the top by means of their positive actions and behaviour pertaining to adherence to safety legislation, which will instil the institutional climate and culture in the employees, who will follow suit (Zondo, 2021). Mhlanga *et al*. (2021) found that employees who have an unceremonious and ungracious attitude toward safety will find it difficult to cope in an organisation with a firm and solid intention to fully comply with safety legislation, which will be regarded as a best practice. However, the opposite also holds true in many local municipalities.

Njomo (2019) argues that employees' perceptions towards safety in the workplace constitute the workplace culture that is infinitely variable. There is a need for a global organisational devotion, determination and dedication to curd the perpetual and persistence of workplace injuries from management to lower-level/entry employees. It will serve the organisation better if the approach is top-down, wherein the management will set the tone

on top, by leading by example. Moreover, injury prevention could only be created by introducing flawless and absolute organisational safety systems (strategies and models) and that should also be established, advanced, approved, documented and promulgated (Khan *et al.,* 2019). However, the safety system would not be perfectly functional without adherence and devotion to all levels as per the hierarchical arrangement of the organisation; in this case, it will be the municipality (Mhlanga *et al.,* 2021).

2.7.7. Regulations for Hazardous Biological Agents (RHBA)

The regulation requires the employers to control measures and infectious prevention to assess the biological hazards that are regarded as part of an imperative risk assessment (Stave & Wald (2016)). The RHBA compels employers and self-employed persons to conduct risk assessments in areas that bear potential risk to contact hazardous biological agents (HBA). Hazardous biological agents are used, handled, produced, stored and/or transported in an exposed manner, such as sites, dumpsites, waste management sites, wastewater (sewer/sanitation), water treatment (purification plant), etc. The regulation necessitates an immediate and interval risk assessment to be conducted in relation to hazardous biological agents. However, putting this into practice has always been a challenge due to lack of appropriate measures (Stewart *et al.,* 2020).

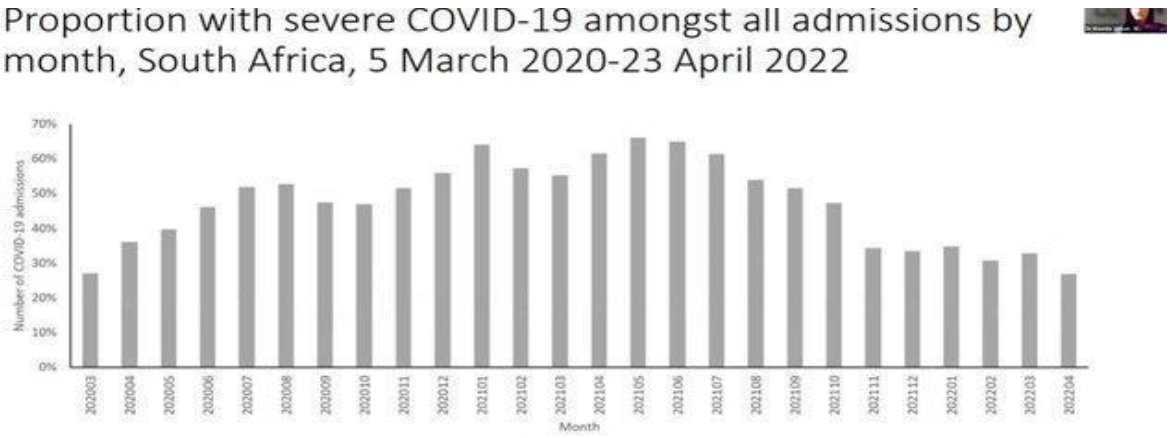
Stewart *et al.* (2020) argue that the aim of assessing risk should be at ascertaining exposure of every employee to HBA, and advise that an employer should strengthen the code through control measures, such as information, training and monitoring exposure in the workplace, and conducting medical surveillance annually as per the OHSA. Stave and Wald (2016) reported and advised that the regulation applies to the newly and recently detected international virus called SARS CoV-2, which is the cause of COVID-19. It can be commented that the country promulgated a compensation directive in March 2020 for people contracted with the COVID-19 virus by the Minister of DEL, wherein the directive was first reviewed in July 2020 and other followed (Stave and Wald, 2016). This is an important legal instrument that should remain in place even post-Covid-19 era, because the risk of exposure to hazardous conditions for municipal workers is yet to be overcome.

2.7.8. SARS CoV-2 (COVID-19) pandemic and OSH-related law reform.

The Covid-19 pandemic caught many organisations and individuals unaware, hence responsive legal developments on the OHS were audaciously implemented, including

multiple reviews and amendments. The DEL acknowledged the existence of the virus by proclaiming a number of guidelines, regulations, notices and directives under the Disaster Management Act as from March 2020 after the official breakout and announcement by the President. The Ministers of Corporative Governance and Traditional Affairs (COGTA), DEL and Health were empowered by the National Disaster Regulations (Regulation 10 (8)) to promulgate regulations that will guide employers to comply with all OHS-related pieces of legislations and/or regulations (Disaster Management Act, 2002). However, the reforms created some loopholes such as omission of employers with fewer than 10 employers. The promulgated guideline advised the employers to appoint a personnel as compliance officer to ascertain standards, rules and commands are complied with; to assess risk relating to SARS CoV-2, known as COVID-19 as a biological hazard; to arrange workplace and administrative requirements; conduct symptoms screening; ventilation, social distancing, avail PPE/C and wearing of masks; sanitising, a plan for employees' return to work, etc.

The DEL unleashed notifications to guide the COVID-19 measures in workplaces, which are; Employee Risk Assessment Guidance on Vulnerable Employees and Workplace Accommodation in relation to COVID-19 in 2020; Guidance note for workplaces in the event of identified infected worker (V5: 14 May 2020); and Workplace Preparedness for COVID-19. The DOH issued Risk Assessment Guides, wherein the DEL issued construction industry related guideline. These departments jointly worked together to develop and circulate the regulation relating to breakout viruses such as COVID-19. The focus was also directed to other sectors such as mining, wherein on the 18 May 2020, the Chief Inspector of Mines presented a Guideline for a Mandatory Code of Practice on Mitigation and Management of SARS CoV-2 Outbreak from Mine Health and Safety Inspectorate under Notice 280 of 2020. However, all these guidelines could not cover the various occupational health and safety risks which exist within the municipal work environment. Figure 2.1 is provided by the National Institute for Communicable Diseases (NICD), that reflects COVID-19's various variants.



	D614G	Beta	Delta	Omicron BA1	Omicron BA4/5
Number of admissions with outcomes	74245	105606	83837	61262	1051
Proportion of outcomes with severe disease	50,7%	59,7%	64,2%	33,8%	23,4%
Proportion of outcomes that died (CFR)	19,5%	25,4%	24,7%	9,8%	4,9%
Median length of stay	5	4	5	4	2

Figure 2.1: COVID-19 illness by NICD (Source: NICD: https://twitter.com/miamalan/status/1520022054577352704?s=21&t=8CtWgB6IpriiG4cw_-RtrA)

2.8. Workplace Emergency Arrangements with Emergency Service

The OHSA provides guidance to employers to establish and ensure a safely, healthy and conducive working condition to its employees and other stakeholders. For example, there should be a floorplan, emergency exits, alarms, signages, assembly points, reliable and refilled fire extinguishers, water sprinklers, etc. Stewart *et al.* (2020) urge that the workplace emergency arrangements should also apply to mines in line with section 9 (2) of Mine Health and Safety Act (MHSA), No. 29 of 1996, which gives the Chief Inspector of Mines the responsibility to ensure that all mines prepare and implement the best practice for emergency preparedness and response relating to matters of occupational safety of employees and other stakeholders. Yearly, the employer should test the response plans to establish its functionality, just to address the negative surprises in advance. The DEL is part of the National Disaster Management Centre and the key national department to deal with employees' labour matters, as it also forms part of Disaster Management Forums, which caters for all institutions in SA, including local government/ municipalities. Adopting a similar direction in the municipal working environment is crucial for ensuring the safety of employees.

2.9. Risk

According to Zondo (2021) risk is a haphazard happening(s) that may haply happen and if it did happen, would have a detrimental and undesirable repercussions on the organisational

plans. Risk covers many areas in the workplace, but the major issue is to identify and prepare for risks. It then follows that those certain stages are followed to assess the level of exposure to a hazardous situation.

During the early stage of analysing risk, the likelihood or occurrence of risk should be assessed, identify current risk and establish latest controls to minimise the likelihood and identify the cost of this purpose can be detected and noticed. There are three risk analyses, which are qualitative, semi- quantitative or quantitative. Risk analysis stages use techniques such as previous experiences, industrial practice, market research, records, experiments, judgement, etc (Sohail & Rehman, 2015). Montibeller and Winterfeldt (2015) provide four methods in risk analysis, which are risk assessment, hazard identity, significance determination of a risk and communicate risk information. In order to improve the productivity and/or services delivery (in a case of public service), the organisation should be more serious about OHS matters, as it is a major concern to different institutions, particularly in developing countries such as SA. These are some of the similar characters or trademarks that many institutions experience; such as inappropriate workplace design (misaligned organisational structure), ill-structured jobs (no proper job descriptions), mismatch between job demands, workers' abilities (mismatch/ill-match in employee capabilities and job requirements, such as qualifications, skills, knowledge, attitude, etc.) and unsuitable environments (unconducive working environments). Workplace hazards impact negatively on productivity and/or service delivery as it increases costs due to injuries and/or deaths (Shirali *et al.,* 2018).

Popov *et al.* (2016) explained that the assessment of risk refers to the action of analysing and weighing up the risk and hazards against an employee's occupational safety and is an efficient and systematic assessment of all aspects of work that consider, for example, a complete hazard identification; identification of all who may be affected by the hazard; how the person is affected; the analysis and evaluation of the risks; and prioritisation of risks. It also includes the identification of undesirable and distasteful incidents, the causes and analysing, the likelihood and probable outcomes, considering the current control measures in order to make an evaluation to the risk event's acceptability.

Restuputri and Fakhri (2016) advocate that the motive necessitate in conducting a baseline risk assessment or hazard identification and risk assessment (HIRA) is to initiate a suitable risk profile or a set of profiles. It is used to prioritise an action programme for the issue-based risk assessments. Below are some of the risk assessment findings for DRJSMLM that were

conducted in September 2019, and discovered the following in different municipal buildings/sites, which were not fully attended to, to date:

Generalised findings in all municipal buildings/sites-

i. Overgrown long grass around the municipal buildings, which can be a source of fire in winter and source of snakes in summer;
ii. Some of the cleaning materials used by cleaning staff do not have information labels as per the requirements of OHS Act, section 9A under Regulations for Hazardous Chemical Substances, which may adversely affect employees' health and safety;
iii. Lack of relevant OHS training (e.g. first aid, firefighting, HIRA, etc) for employees, including health and safety committee members and managers;

Headquarters

iv. Lack of safekeeping facilities, change rooms and dining rooms for general assistant employees in terms of OHS Act under facilities regulations sections 3-5;
v. No evacuation plans due to a lack of floor plans, which can result in unsafe evacuation in the event of an emergency;
vi. Exit doors not in compliance with preconditions of section 9 of the OHS Act, under Environmental Regulations for Workplaces;
vii. Insufficient storage facility, which results in poor housekeeping;
viii. Toilet leakages, out of order toilets and toilets without toilet seat lids, cistern covers and flush levers;
ix. Office furniture, which is no longer in good condition, increases the likelihood of injuries emanating from poor ergonomics;
x. Inadequate fire prevention/protection apparatus such as fire extinguishers, fire detectors and fire alarms in the municipal buildings;

In licensing Siyabuswa–

xi. The whole building has one entrance/exit door. No other door designated for exit in the event of an emergency;
xii. No evacuation plan due to non-existence of floor plans for municipal buildings;

Technical services main site/building-

xiii. Falling ceiling board in the storeroom may result in head injuries;
xiv. Floors not in good state of repair may result in trip and falls incidents;

xv. Old documents and files that are stored in the store room can spread fire in the event of a fire incident;

xvi. The housekeeping of the storeroom is not in a good state. Some small materials are stored directly on the floor, which can cause trip and fall incidents;

xvii. Fleet: Municipal vehicles without licence discs and not certified for road worthiness;

xviii. Broken furniture and unused materials stored in the workshop obstruct walkways and fire prevention equipment, which increases trip and fall incidents and failure to use the fire prevention equipment in the event of fire;

xix. Absence of warning and information signs such as *No smoking*, *direction* signs, etc. around the facility;

Wastewater (sanitation)-

xx. The wastewater team uses normal overalls when working in manholes or chambers, which exposes them to bacteria, which can cause diseases;

xxi. No hot water in the ablution facilities due to malfunctioning geyser;

xxii. The environment has breathing apparatus; however, no person is trained in the use of the breathing apparatus in case of an emergency;

Weltevrede Water Purification plant (Kameelrivier B)-

xxiii. Water pipe leakages in the plant result in wet floors and electric cables containing live electricity immersed in water, which exposes employees to electric shocks or death;

xxiv. Improper electrical connections by security officers to make fire, which may result in fire disasters or personal injuries;

Council chamber-

xxv. Fire hose reels may lay dormant during fire disasters due to poor connection of water supply to fire hose reels;

xxvi. The whole building has one entrance/exit door. No other door designated for exit in the event of an emergency;

xxvii. Absence of warning and information signs such as *No smoking*, *direction* and etc;

xxviii. Non-existence of fire prevention/protection apparatus such as fire extinguishers, fire detectors and fire alarms;

xxix. No evacuation plan due to non-existence of floor plans.

Hopkin (2018) defined risk management as the identification and mitigation of risks by the implementation of appropriate control measures. Smallwood (2015) advised that part of the baseline risk assessment or hazard identification and risk assessment (HIRA) methodology is considering who may be at risk, by what, where, when, and why, and this must be addressed from a People, Equipment, Process, Procedures/Practices, Material, Environment, Legal and liability and Finance (PEPMELF) point of view, of which it looks at:

2.9.1. People

This focuses on people at risk and who must be distinguished, which include employees working in a hazardous working environment, groups of people consisting not only of employees but also visitors, suppliers, contractors, sub-contractors, and anyone else who may visit the organisation's (municipal) facilities.

2.9.2. Equipment

It involves any equipment or tool within the institutional facility that might cause hazard and is of danger to employees and clients.

2.9.3. Process

Do we have effective and efficient processes in place to execute activities and operations?

2.9.4. Procedures/Practices

The employer should have safe work procedures (Standard Operating Procedures – SOPs) in writing to ensure that there is clear explanation and instruction on how specific tasks should be perfomed.

The question could be, do employees execute the allocated task as described in the SOPs, or are they displaying risky behaviour by taking short route to complete the work?

2.9.5. Materials

Materials to be used should be evaluated against the possibility to cause accident/incident or increasing the possibility to cause accident/incident.

2.9.6. Environment

Environmental assessment is important to establish whether the facilities are safe from, for example, the possible spread of fire, which can be cause by tall grass, spills and so on. As indicated below, currently, the municipality is experiencing overgrown long grass around the municipal facilities/buildings, which can be a source of fire in winter and a source of snakes in summer.

2.9.7. Legal and liability

The focus is on legislation governing safety in the workplace as well as the consequences for contravening them.

2.9.8. Finances

Certain measures are costly to comply with and, even after being contravened, the legislations regarding a worst-case scenario emerge. A chief executive officer, in a municipal environment, will be called a municipal manager and should be charged an amount estimated to R100 000.00 and/or two years' imprisonment or both. To minimise the hazard and risk in the workplace, the employer is legally liable to conduct risk assessments, have safe work procedures in writing, keep training records, conduct task observations, and discipline employees for contraventions with the legislation/s (OHSA, 1993, RSA Constitution, 1996).

2.10. Physical injuries at workplace

The physical injuries of factory's employees stretch from moderate to deep in severity, where the finger or hands were predominantly destroyed in these accidents, as revealed in the study. Injuries indicated that the fingers of the upper extremity accounted for the highest number of accidents. The middle fingers of both left and right hands, index and thumb were mainly affected in accidents. The most accidents in case of lower extremity of the body were on the toe, foot and leg (Mekhlef *et al.,* 2017). The psychological and physiological health effects is caused by the various adverse environmental noise exposure (WHO, 2016). In the workplaces where a daily amount of noise exposure go over 89 dB is supplementary hazardous for those who are suffering from mild noise-induced hearing loss. Reducing the noise contact reduce the number of employees injured because they are unable to hear auditory cautionary signals. This should improve not only the general working conditions, but also lower the risk of acquiring noise-induced hearing loss (Girard *et al.,* 2015).

2.11. Human factors and ergonomics at workplace

Bridger (2017) attested that ergonomics is not only about the workplace space arrangement that affects physical factors, but rather a school or profession in understanding where and how people's work is arranged, where they work, the resources they use, the work they do, the environment they work in, with the desire to provide a tailor-made system that is compatible with the capabilities of the employees (Stanton *et al.,* 2017).

In SA, there is an organisation called Ergonomics Society of South Africa (ESSA), which is a federated member of the International Ergonomics Association (IEA) (https://iea.cc/) and also a non-profit organisation. ESSA is a member of ErgoAfrica and BRICSplus networks of ergonomics societies (Thatcher *et al.,* 2018). In 1984, ESSA was established as the professional ergonomists association and cognate disciplines in the country (Davy *et al.,* 2018).

In 2015, the society received non-profit organisation status. The council is formed and encompasses dedicated scholars on a voluntary basis. There is an inevitable, visionary and expected flourishing, broadening and thriving of this young profession, which will be ushered by two ingredients, such as growth in benefits awareness that is attached to good ergonomics in the workplace, and the promulgation and implementation of the Ergonomics Regulations, which were officially published under section 43 of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) on 6 December 2019. According to Thatcher and Yeow (2018), the society intends to encourage the development of ergonomic regulations, compliance and implementation through providing awareness, knowledge and support to members from different industries. There are four core areas that divide the roles of society, which are as follows: establish awareness and understanding of what ergonomics is and its related benefits, facilitation of strategic partnerships, development of the scientific practice of ergonomics, and the allocation of resources for the development and advancement of ergonomics in South Africa. ESSA has a responsibility to provide support to different institutions from different sectors, which include government, and more specifically local government for the purpose of this study. Their responsibility is to ensure that ergonomics is promoted in the workplace for the better well-being of employees and also the incorporation of OHS systems in the work environment (Ferreira & Strydom, 2015).

Meister (2018) alluded that ergonomics is a discipline on its own and it is usually regarded as human factors and ergonomics (HFE), to contemplate the systemic and holistic nature of the discipline. This focus is captured in the definition provided by the International Ergonomics Association (IEA), where HFE is defined as the scientific discipline concerned with the understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data, and methods to design in order to optimise human well-being and overall system performance (Hignett *et al.,* 2015). Other known ergonomics challenges are experienced in different industries/sectors such as government, agriculture, mining, travel and tourism, etc., that require awareness, incentive,

training, guidance and occupational health and safety programmes for management and ordinary employees, as Vural and Sutsunbuloglu (2016) advised that this could refer to the use of machinery, hand tools, manual materials handling, workstations and other related equipment relating to institutional organisational structures and the nature of work. Girard *et al.* (2015) advised on body parts' dysfunctionality due to unconducive work ergonomics, which could also be caused by unsafe working environments (Shirali *et al.,* 2018).

It is known that the workplace always manifests safety hazards to employees, which contributes to challenges such as cardiovascular diseases, cancer, reproductive disorders, respiratory diseases, injuries, musculoskeletal disorders, eye damage and hearing loss, mental and neurological illness as well as other communicable diseases (Kortum, 2016). Some hazardous industries pose poor working conditions, which threaten the employees' health and safety and cause complications such as lung cancer, hearing deficiencies, as well as eye and/or skin allergies. It is the duty of government at all three spheres (national, provincial and local government) to establish a health and safety council, which will be aimed at ensuring the protection of lives of employees as it is a constitutional right (Reese, 2018).

2.12. Environmental and human safety risk assessment

This kind of risk assessment is regarded as the most important inceptive stage of an environmental management system. It is obligatory, mandatory and compulsory for organisations to do a rigorous risk assessment that should be before and during the operation with the motive to upgrade safety and quality of life. The source of risk should be identified and pointed out with the specific classification in order to prioritise risk according to their ranking and magnitude by the decision-makers. In a municipal environment, the environmental decision-makers may develop management safety alternatives for on-going safety risks, which focuses on municipal plants, wastewater, water treatment, waste, environment, disaster unit, etc., which are using hazardous materials (Adams, 2017). One of the determined roles of the safety specialist is to assess the risk for potential hazards, as well as monitoring and maintaining the safer status quo, while preventing the risk that could be inflicted by employees (Ning *et al.*, 2018). Occupational health and safety encompasses all elements that relates to the work, including the type of the work and the working conditions that may cause injuries, working methods, diseases or other safety repercussions among employees. It includes deafness from loud noise in the workplace, unsuitable working condition, mechanical risk during the use of machinery, physical and mental strain

from monotonous and heavy work, long working hours or very high speed, the physical and chemical hazards (which include intoxication from the irritating substances and inhaled fumes, dusts, vapours or gases), as well as skin diseases. Furthermore, having hostile or uncommunicative relationships among employees contributes to detrimental, harmful and unhealthy working environments with numerous neurotic (neurological) symptoms such as stress, anxiety, depression, etc.

There was a study which presented three model of groups of accident inhibition determines, which are structural conditions, modification of attitudes, and behaviours (Petitta *et al*., 2017). There are two types of risk aspects, namely environmental and physical, which are influenced by these three factors, which focus on the behaviours of employees as well as other factors, namely social norms, attitutes and cultural beliefs. It is requisite to institute involvement that affect the safety features, the social norms and standards of culture and to organise a comprehensive preventative strategy (Lund *et al*., 2016).

2.12.1. Mechanical hazards

The National Institute of Occupational Health (2014) indicates that mechanical hazards are the ones that occur due to machines' protruding parts and are also caused due to friction, injury, slips and falls. Connor *et al.* (2017) argue that mechanical hazards are due to the failure of mechanisms, and these can be as a result of malfunctioning of electrical and mechanical equipment, which is precipitated by obvious or measurable defects that are not recognised in time. Data on radiation oncology devices (RODs) from 1991 to 2015 were sorted into four product categories, namely; external beam, brachytherapy, planning systems, and simulation systems and five device problem categories, namely; software, mechanical, electrical, user error, and dose delivery impact (Conor., 2017). Andola (2016) avers that these can be due to excessive alternating tensile and comprehensive stresses at a point in a steel component, where fatigue cracks develop and grow until the component fractures or due to chemical action between lubricating oil and a rubber O-ring, the latter expanding and causing the air-motion to get jammed. These have a likelihood of affecting units such as wastewater and water treatment, electricity and mechanical, roads and stormwater, waste and environment, facilities, and others.

2.12.2. Psychological and/or psycho-social hazards

These are examples of psychological and/or psychosocial hazards; shift work, workload, dealing with the public, harassment, discrimination, threat of danger, constant low-level noise, stress, violence, etc. (OHSA, 1993). Psycho-social hazards tend to arise from workers' failure to adapt to an alien psychosocial environment.

Workplace threats, intimidations, provocations, and other related aspects, could be classified as one of the issues that contribute to psychological hazards. Some of the municipal employees were declared as shift workers as per Clause 9 of the South African Local Bargaining Council (SALGBC), Collective Agreement on Conditions of Services for the Mpumalanga Division, 2018, as extended (Mashamaite & Lethoko, 2018).

It should also be noted that occupational violence could also result in criminal charges laid against the perpetrator. Workplace violence is an act in which an employee (in most cases) is abused, threatened, bullied, intimidated, assaulted, or in a worst case scenario an act that causes death (Lippel, 2016). Physical assault on the employer, a fellow employee, client, or customer is regarded as serious misconduct wherein the internal policy and procedures should be followed, such as Schedule 8 of the Labour Relations Act (LRA, 1995), and municipal disciplinary procedure policy. Employers/municipalities have a constitutional obligation to respect and protect the dignity of their employees, as per sec 23 of the RSA Constitution (RSA Constitution, 1996).

Luthans and Youssef-Morgan (2017) introduced and give advice regarding psychological capital (PsyCap), which can have a promising impact on construction workers' psychological health, and possibly leading to positive performance. Limited studies have tested PsyCap and work engagement regarding safety specifically within the context of the construction industry, with non-harmonious findings. It can be a possible ideal predictor for work engagement, which may boost safety-related behaviour and should be treated as a multi-dimensional instrument to augment occupational safety (Rabenu *et al.,* 2017). Bergheim *et al*. (2015) advised that a thorough consideration is required from the organisation while applying PsyCap to supplement employees' work engagement as well as safety behaviour as a practical interventions based on interactive training plannned to reinforce safety.

2.12.3. Poor air quality and ventilation

Wolkoff (2018) advised that the workspace requires fully and reliable ventilation and air condition systems, which address the erratic humidity level, and indoor air, as failure to do so results in ventilation whack, which will pose hazard to the safety of employees.

Ensuring good indoor air quality by means of fresh air is a universal control for any variant. Failure of the employer to install systems and instil a culture of compliance with safety regulations may have detrimental repercussions, such as headaches, fatigue, irritability, and loss of focus by employees (Heracleous & Micheal, 2019).

Employees mostly feel sickness when they are in the workspace/workplace and the sickness tends to vanish the moment they vacate the workplace. As a result, the employer should ensure that it removes the pollutants prior so that they can spread to other targeted parts of the workspace, as that may cause a dilution of contaminants, thermal comfort as well as equal air distribution. Rai *et al.* (2019) discovered that the removal of dust particles and other related toxins, which are caused by air penetrating the filter, should be established. This could be a safer method, process and procedure for employees to safely prosper in the absence of respiratory safety menaces and/or other conditions.

2.12.4. Extreme temperature

According to Lee *et al*. (2019), internally, body temperature may experience a downfall to the regular limit as the body normally uses the heat so speedily that it can produce it in freezing conditions. This condition(s) could lead to even less efficiency, speech difficulty, cold and numb hands, involuntary shivers and disorientation. The ultimate results of this kind of condition may result in exhaustion, cramps, heat rash and even heat stroke (Park, 2022).

Stave and Wald (2016), in addressing cold environment hazards in the workplace, stated that it is advisable for every employer, as far as reasonably feasible, to ensure that there are sufficient and adequate systems in place to address matters relating to heat. The employer should provide employees with proper multi-layered clothing (PPC/E), air conditioners (for office-based personnel), fitted, etc., which assist the conservation and preservation of internal body heat. Air cooling systems are obligatory to be installed in a hot, hazardous working environment, wherein the employer should also afford the employees and opportunity breaks for resting purposes so that their body could recuperate. In order for employees to re-hydrate, clean, portable, purified and healthy water should be offered.

2.12.5. Confined spaces

McManus (2018) argues that confined workspaces include, but are not limited to vaults, manholes, tunnels, ductwork, pipelines, vessels, silos, storage bins, pathways, unventilated spaces/rooms, small work areas, trenches, drainages, tanks, etc. Deficiency of natural light, high concentrations of dust or liquids, shortage of oxygen, heightened exposure to fumes, etc., could also be caused by confined workspaces, which pose serious hazardous conditions to employees and even other stakeholders. This has the potential to cause severe physical injuries, wherein, in a worst case scenario, it could cause death, as this is a high risk to human beings. The cause of accidents and fatalities due to confined space work is related to a lack of awareness about the presence and the risks of such hazardous workplaces.

Botti *et al*. (2017) advised that any employee or person who is due to work in confined workspaces should be conversant with all relevant safety guidelines that are relevant pieces of legislation and regulatory bodies that should be complied with all the time. The OHS office, supervisors and/or manager(s), as the employer's representative(s), should offer professional safety assistance to employees in the event of working in confined spaces. In this case, the municipality will have to engage with employees through trainings, workshops, seminars, etc. to offer a conventional orientation specifically to the affected workers at least once a year as things evolve, just like medical surveillance that is conducted yearly as guided by OHSA.

2.12.6. Working at height

Shuaib *et al.* (2021) outlined some of the work/responsibilities in the workplace, which may include working at height, such as roofers cladding the roof, steelworkers constructing a structure on top of a building, fixing and installing electric cable/wires, welders welds metal from the side of the structure, demolition workers dismantling elevated machines, etc. The fall of objects, which could happen accidentally, accounts for the absolute high number of yearly occupational casualties (Pham *et al.,* 2018).

In order to deal with workplace risk, a satisfactory work design and use of quality relevant equipment and materials are fundamental and principal in guaranteeing the longevity of the tools used. PPC/E and other equipment should be prescribed and stipulated, as it is also required that they should be precisely stationed, located and installed (Craciun, 2017). A trained and capacitated employee in the field of safety, who clearly understands safety

regulations, should ensure that the designs are installed and regularly checked (OHSA, 1993). Some injuries and diseases probably happen to employees whose work/responsibilities are to maintain, repair or install, such as employees in units such as electricity, water, sanitation, facility, maintenance and others.

2.12.7. Poor construction

A sub-standard constructed building is one of the hazards not only to employees, but also to everyone who accesses the building, and in this study, it may be community members, service providers and any other stakeholders. For example, in a municipal environment, you have community members coming to pay for rates and taxes, car license disks, meetings, etc. Construction designs and materials that are unsound as well as errors in laying the building foundation are the regular and known causes of buildings not being well-made and stronger (National Building Regulation Standards Act, 1977). Poor building project management of the construction weakens the building's structure due to inappropriate equipment, fallacious estimates, etc.

According to Ahmad *et al.* (2016), to address this issue of poor construction of office buildings, the municipality must first procure and appoint a competent partner in construction, which consists of architects, engineers, surveyors and an actual construction company. The municipality needs to be closely involved in managing and organising things and in making decisions regarding the construction in order to avoid any deviation and conflicts from the concluded and structured building plan. This direction is regarded as a very first essential and valuable step in constructing a safe working environment for the future.

2.12.8. Dangerous machines

Hazards posed by dangerous machines include the possibility of amputation or being caught-in, especially when workers deal with repetitive motion. Sharp edges could also cause injuries when left unguarded. If they use corrosives or other harmful chemicals such as chlorine, the possibility of leaks may also arise. For example, our Department: Technical Services, Wastewater (Sanitation) and Water Treatment (Water Purification) is the typical example of a department that uses chemicals such as chlorine. Chlorine and fire leakage get the highest value because its impact threatens many things, such as industrial disasters that could endanger human life, damage premises/facilities and the environment.

Control measures to be undertaken to avoid potential hazards are to comply with safety legislations such as by applying the use of personal protective equipment, OHS programmes such as issuing work permits, emergency response training, task observation, etc. (Falakh & Setiani, 2018). Municipal facilities and buildings' electric wirings pose a risk of electrocution of employees and it should be attended to all the time, which is the responsibility of the facility unit together with the electricity and mechanical unit. Dangerous machineries could pose hazards to the eyes as they might be a risk as a result of dust, chips or sparks that could be from heavy-duty machines (Malysa, 2019).

Relevant and regular training aiming to continuously capacitate the affected employees is regarded as a beneficial, functional and yet useful mechanism to avoid dangerous machines' risk/hazards (DRJSMLM reviewed and approved Work Skills Plan, 2021). It is the responsibility of the employer (the municipality) to conduct appropriate and relevant training, workshops, awareness, seminars as well as task observations in order to skill, upskill and re-skill employees on how to operate machinery safely, as required. In that way, employee will be in an ideal position to analyse when the workplace is no longer safe.

2.12.9. Defective workplace tools

Pitts and Brereton (2016) argue that tools used at work make the work easier and effortless, but if the employer provides the employees with defective tools, that could cause a catastrophic misfortune, which could at least be a cut of a finger or worst, irreparable and permanent damage to the body. An example could be grass cutting equipment that is used mostly by employees under the Department of Community Development Services – Unit: Waste and Environment as well as community programmes. Sometimes, employees continue to use the defective tools, as a result of no replacement and the urgency for the need for services, of which this should be the responsibility of the supervisor to ensure that this does not happen. By using the shoddy and malfunctioning tools, this could result in employees being injured or others neraby, by that means hindering the perpetuation of service delivery and/or productivity and causing more harm than good.

In a municipal environment, procurement of goods and services is the responsibility of Department: Finance, as a result, the user department/unit would have to coordinate and arrange with the procurement unit (Supply Chain Management – {SCM}) to trigger a purchase of a replacement items (DRJSMLM reviewed and approved SCM policy, 2021). It is advisable for every employee to refrain from using dilapidated and defective tool as the

employer should provide replacement and/or any alternatives to perform the job. Impaired and depreciated tools or objects are not to be used or overused, which include municipal fleets.

2.12.10. Emergency preparedness

Even the newest tools and the most durable buildings will not ensure the safety of workers without an adequately laid down emergency preparedness plan (OHSA, 1998). This inadequacy can happen through simple negligent acts in the building (National Building Regulations and Building Standards Act, 1987).

As a matter of compliance with OHSA and building regulations, for a building to comply, it must have fire exits for the purpose evacuation, from where employees can quickly escape, even in case of earthquakes (Fire Brigade Services Act, 1987). Small and confined walkways may hinder the quick and shift evacuation of people during fire emergencies. A detailed floor and emergency plan should be in place for every municipal building and they must be visibly mounted (DRJSMLM reviewed and approved OHS Policy, 2021). It is a must for floor plans to be visible in all municipal facilities and buildings to provide direction towards emergency exits. Signage should be mounted in appropriated spots to be seen. Regularly, the municipality must conduct earthquake and fire drills as an awareness and part of upskilling to employees on the conventional and appropriate way to respond to emergencies. This could be practised once in a quarter.

DRJSMLM should ensure that, at all the times, it complies with OHSA by ensuring that the following are in place: filled and/or re-filled fire extinguishers, floor plans, evacuation plans, assembly points, OHS committees, etc. (OHSA, 1993).

2.12.11. Poor sanitation

Arthur *et al.* (2019) advise that employees are faced with higher prospects of experiencing ill-health and infections compared to a clean working environment due to poor sanitation infrastructure. In a filthy and insanitary environment, diseases tend to advance hastily and that makes it difficult to maintain. Over and above that, stained workspaces have the potential to discredit the reputation of the institution. In this study, the municipality could experience that as it renders a service to the community members and members are expected to visit the municipal buildings and facilities for access the goods and services. Appropriate sanitation is the sole responsibility of every employee in the organisation, be it

management or employee at the lower level of hierarchical structure. The employer, which in these case is the Dr JS Moroka Local Municipality, should provide sanitiser wipes and tissues in all the office premises, especially in the restrooms (Ringwood, 2017). Employees are advised to disinfect whenever the need arises and always apply the mantra, '*clean as you go'*.

2.12.12. Biological hazards

According to Mehrdad (2020), unclean workspaces attract infectious agents, which threaten the safety of employees. Pneumonia and tuberculosis are caused as a result of bacteria, just like other diseases that travel on or propagated by contaminated water (waterborne diseases) such as cholera and typhoid. Meanwhile, parasitic worms from improperly discarded leftover food can cause debilitating illnesses in the stomach and digestive system. Arthur *et al.* (2019) asserted that one of the effective solutions to biological hazards to employees could be proper and adequate sanitation.

Moreover, as part of the employee assistant programme, the municipality may provide complimentary immunisation services to the employees to better equip them physically, as this could increase the chances of employees surviving any chance of contracting hazardous diseases, while, by doing so, promoting safety in the workplace.

The municipality is expected to fully comply with the General Administrative Regulations promulgated under Government Notice No. R.1449 of September 1996 under section 43, Facilities Regulations promulgated by Government Notice No. R.2362 OF 5 October 1990 under section 43 of the OHS Act, 1993. These notices advise the employer to take reasonable steps in relation to hazardous biological agents (HBAs), which may cause toxicity, allergy, infection, or even institute a hazard to an employee's safety in the working environment. For example, the regulations advise that any person who is or might be exposed to HBA shall obey any lawful instruction given by or on behalf of the employer and any employee should as reasonably as possible report to the employer, OHS personnel, the health and safety representative, etc., about any possible accidental exposure to an HBA at the workplace, and such incident should be investigated and recorded in line with regulation 9 of the General Administrative Regulations (Stave and Wald, 2016).

2.13. Safety as part of National Development Plan (NDP) vision 2030 in SA

The National Development Plan 2030 is an important policy document of the South African government drafted in August 2012 by the National Planning Commission, which is a special

ministerial body first constituted in 2009 by President Jacob Zuma, launched on 19 February 2013. It defines a desired destination and identifies the role that different sectors of society need to play in reaching its goal, Minister in the Presidency: National Planning Commission, Trevor Manuel, said at a media briefing on the implementation of the plan on 19 February 2013. Mayors, who are the municipal political heads, must be visible and active champions of the plan, with their offices being the catalytic agencies to drive implementation at the municipal level. The National Development Plan is a plan for the country to eliminate poverty and reduce inequality by 2030 by uniting South Africans, unleashing the energies of its citizens, growing an inclusive economy, building capabilities, enhancing the capability of the state, and leaders working together to solve complex problems (NDP 2030, 2013).

The plan outlines some of the structural challenges in the country, which include inadequate and limited progress in improving human development concerning education, health and safety, of which, within this context, it will be in the working environment.

One of the goals of the NDP is to accomplish decent work strategies, which must level quick growth and diversification in employment opportunities with the security of human rights as enshrine in the RSA Constitution, wherein there will be a requirement for policy involvement to enhance job opportunities and labour protection. The plan states that one of the main areas that requires attention is the development, reviewal, monitoring and implementation of H&S regulations. Occupational safety and health in all sectors, formal or informal, should not be handled and managed separately with disengagement from other socio-economic issues. Exposure to hazardous working environments exposes people to work-related accidents and/or diseases and if these affect the breadwinner, it can push the family into deeper poverty. "*Who gets hurt when an accident/incident happen due to non-compliance in the workplace"* Adv. Ernst van Biljon.

Fourie (2018) emphasises that municipalities should take part in a substantive and considerable position in managing occupational health and safety for the informal sector. This would include providing information to workers about health and safety issues in specific sectors, and facilitating access to information from other sources. Municipalities should partner with the private sector to improve working conditions and ensure that safety equipment is provided. They should improve the implementation and enforcement of health and safety standards by requiring employers to invest more in occupational health and safety and organising alternative provisions for the informal sector and the self-employed.

According to NDP vision 2030 (2013), the different regulatory institutions and professional bodies in the health and safety sector must be strengthened to support the purpose of NDP vision 2030. RSA will have to establish different organisations to ensure that the country have a conformable, morally and ethically-driven health and safety working environment that puts employees first. According to section 2(1) of the Health Professions Act (No. 56 of 1974), they aim to establish the OHS professions bodies in South Africa, such as South African Institute of Occupational Safety and Health (Saiosh), Health Professions Council Of South Africa (HPCSA), etc. The general purpose of these bodies is to, among others:

I. Professionally register health and safety practitioners;
II. Promote occupational safety and health in the workplace;
III. Advance the art and science of OHS;
IV. Support, sustain and safeguard the professional interests (individual members and institutions);
V. Provide compliance guidance in fields of occupational safety and health;
VI. Establish a method and procedure for sustainable development and growth;
VII. Develop the professional advancement of occupational safety and health;
VIII. Provide members and interested persons, bodies with reference material and news via the electronic media, and etc.

2.14. Chapter summary

This literature review chapter highlighted the major safety issues in the workplace. Literature shows that despite the existence of several international conventions on the safety of employees, including the national legislative commitments to regulate safety in the workplace, many organisations are reluctant to comply. It is agreed that compliance with safety requirements should be embedded in organisational culture. It was noted that non-compliance is often accompanied by loss of life and bears costs that are detrimental to financial sustainability. The knowledge gaps identified in literature include a lack of compliance, which is blamed on poor management of safety issues. The next chapter contains the methodology of the study, which was used to identify the level of compliance with safety regulations.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1. Introduction

This chapter discusses the research methodology that was followed to achieve the objectives of this study. The chapter outlines the research process, which includes the research philosophy, research paradigm, research design, population, sampling, and sampling technique. Furthermore, the data collection and data analysis methods were also explained and the ethical processes followed outlined.

3.2. Research philosophy

The research philosophy that guides this study is positivism, which adheres to the view that only factual knowledge gained through observation (the senses), including measurement, is trustworthy. In positivism studies, the role of the researcher is limited to data collection and interpretations in an objective way. Saunders *et al.* (2016) explain that the philosophy of a researcher is a conviction about how information is assembled, broken down and utilised. As a result, the philosophy determines the technique and approach most appropriate for a particular study (Eberle, 2015).

3.3. Research paradigm

This study derives from an epistemological viewpoint that applies a positivism research paradigm. As defined by Schmitt (2017) epistemology as a study of the fundamental nature of knowledge that deal with obtaining skills through the affirmation of information (data) and the scope of the study as well as the scientific methods, by distinguishing viewpoints from factual reality. Sasa (2020) explains that positivism ideology focuses more on the unbiasedness and capability of the researcher when analysing and interpreting data as well as the restriction pertaining to data collection.

As such, a quantitative research method was used to analyse the level of compliance with safety regulations at the Dr JS Moroka Local Municipality. Cherniak *et al.* (2020) explained that these research method is identified as “the collection of information from a sample of individuals through their responses to questions.” In this study, only employees from DrJSMLM were respondents to the questionnaires (Check & Schutt, 2017). Questionnaires used obtained data from the targeted sampled respondents, in a numerical form, who are employees of the municipality from different hierarchical levels of the municipal organisational structure.

3.4. Research design

The design followed in this study was descriptive and was intended to obtain sufficient information that describes the phenomenon under investigation. Furthermore, this designs aims at identifying a phenomenon in its natural setting (Harrison *et al.,* 2017). In the application of descriptive design, simple descriptive statistical analysis methods such as means, percentages, and frequencies are commonly used to analyse data. Furthermore, descriptive statistical methods were used for bivariate statistical analyses such as analysis of variance (Belouafa *et al.,* 2017).

3.5. Research approach

This study used a quantitative research approach in order to measure and quantify variables and generalise outcomes from a sample targeted population (Bell *et al*., 2022). Williams (2007) points out that quantitative research is commonly used with regard to questions that have relational variables within the research. Based on the questionnaires distributed, the nature of this investigation was quantitative.

3.6. Population and sample

The word population in a context of this study relate to an absolute set of targeted individuals with a certain specialised and distinctive set of characteristics. According to Asiamah *et al.* (2017), a research sample is formulated of different members of the study population who took part in the research (survey), while the method of choosing a representative group from the studied population is defined as sampling.

Bhardwaj (2019) states that the research population focuses on a decent-sized targeted number of employees who will be part of the happenings (study data collection) under scrutiny.

Taherdoost (2016) characterises sampling in research as a process of choosing a portable group from the total number of the population (municipal employees appearing on the organisational structure), which reflects the characteristics of the total population in a particular study. In this study, the total population comprised all workers (from general workers to managers) from all departments within the Dr JS Moroka Local Municipality (Thomson *et al*., 2020).

There is a total of 536 employees working in all departments for the Local Municipality, as shown in Table 3.1.

Table 3.1: Employee as per the departments at the DRJSMLM

Department	**Number of employees**
Office of the Municipal Manager (officials)	35
Department: Admin & Corporate Services	37
Department: Community Development Services	161
Department: Technical Services	220
Department: Budget & Treasury/Finance	83
Total employees	**536**

Source: Researcher's own data

Consequently, the total population for this study was 536 employees (filled posts), as per the approved organisational structure (DRJSMLM IDP, 2021). The job description of every employee features the responsibility to adhere to and always observes the safety regulations when in line of duty, which include the OHS committee representatives who are expected to champion safety in the workplace.

3.7. Sampling procedure

Sampling is the process of selecting a part of the population to represent the whole population (Farnell *et al.*, 2020). Two methods of sampling exist; they are, probability and non-probability sampling. Probability sampling is defined as a fixed and known opportunity wherein it gives all members of the population an equal chance to be part of the sample. With non-probability sampling, however, there is no definite probability of a person to be a part of the sample (Farnell *et al.*, 2020). The sampling technique used for this research was probability sampling, because respondents were selected randomly.

3.8. Sampling Methods

A general rule with probability sampling method is to always use the largest sample possible. The bigger the sample, the more representative it is going to be. Smaller samples are less

representative of the population and therefore produce less accurate results (Asiamah *et al.*, 2017).

The probability sampling method is adopted and embraced in this study. The following are four types of the methods in question, namely cluster, systematic, simple random, and stratified random sampling.

Simple random sampling is where participants are chosen from the population randomly, merely by chance. Cluster sampling divides the population into groups that are identified based on their demographic parameters. Systematic sampling has a predefined range. Stratified random sampling, on the other hand, is a method in which smaller groups that do not overlap are selected by the researcher to divide the population. These small groups represent the entire population (Leavy, 2017). This study adopted a stratified simple random sampling approach.

3.9. Sample and sampling technique

According to Taherdoost (2016), sampling is the process of selecting people or units for inclusion in a research study. The sampling strategies used in this study were aimed at obtaining a sample size that is a true representation of the actual interested and targeted population. Instead of census, sample population was used as a result of the National Disaster Management Regulations that were in place during the period of data collection (Ponto, 2015). In this study, a stratified simple random sampling approach was followed to determine the sample size. The use of a stratified simple random sample was to ensure that the population is divided into homogenous groupings called strata, from where respondents were drawn using the simple random technique (Babbie, 2017). In this study, the strata were the municipal departments/units.

3.9.1 Determining the sample size

The sample size is the sum of the number of elements to be pulled from each stratum. The sample size calculated, as used by Krejcie and Morgan (1970), was used to determine the exact sample size at a 95% confidence level, as shown in Table 3.2.

Table 3.2: Krejcie and Morgan sample size determination table

Table for Determining Sample Size of a Known Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: N is Population Size; S is Sample Size *Source: Krejcie & Morgan, 1970*

Source: Krejcie and Morgan (1970)

Based on the total population of 536 employees, which is close to 460, as shown in Table 3.2, the sample size requirement for a study of this nature with a 5% margin of error is 210. Therefore, a total of 210 employees was selected.

3.10. Research instrument

In this study, the data collection instrument was a survey questionnaire with scalar measurements. Moyo (2017) states that data collection instruments constitute a fundamental component of the research process, as they provide the analytical basis in the quest for answers to a given research problem, as many studies use instruments such as questionnaires, interviews, and observation to collect data. In the questionnaire, as they were sent, every respondent was asked to answer all questions, in which their responses were treated with the utmost confidentiality.

A pilot study is a trial collection of data to detect weaknesses in design and instrumentation and to provide proxy data for the selection of a probability sample (Rahi *et al.,* 2019). Conducting a pilot study provided the opportunity to develop and enhance the skills necessary before commencing the larger study. By conducting pilot testing, it enabled the researcher to obtain preliminary data, which allowed the researcher to evaluate the data-

analysis method and clarify the relevant risks on safety issues, as well as financial and human resources required, among others.

The aim of the pilot study was three-fold: Firstly, to test the data collection tool to improve the items of the questionnaire. This led the researcher to establish, roughly, how much time was needed to administer the data collection tool; secondly, to establish whether the instrument answered the objective of the study; and thirdly, to analyse the collected data and try to establish the extent to which the data analysis procedures are appropriate for the nature of data being collected by the data collection instrument (Pigini *et al.,* 2017). Pilot testing helped to eliminate certain weaknesses in the questionnaires when using the quantitative method, as it is the preliminary exercise to the bigger project. The testing was executed by taking 10 employees from the various departments and different hierarchical levels randomly.

A measuring instrument shows various techniques utilised by the researcher to obtain data from respondents for study purposes. Data means all information acquired from the respondents during study (Birmingham & Wilkinson, 2003). In this study, a close-ended questionnaire was used as a measuring instrument. This questionnaire was distributed to respondents in an attempt to sample their opinions on matters that relate to the objectives as outlined in Chapter 1 of this study.

According to West and Blom (2017), one of the limitations of a questionnaire is that vague study questions can not be clarified, as the researcher may not be present to provide clarity. To ensure that all questions were clear and understandable, the questionnaire was piloted and checked by some senior academics within the university for its quality. There is also a chance of missing information, since respondents may omit answers that do not appeal to them or that they feel are irrelevant to them. Furthermore, at times, the questions may require a certain level of literacy for respondents to understand, thereby limiting respondents to literate individuals only (Birmingham & Wilkinson, 2003). The questionnaires distributed were clear and participants were asked to answer all questions.

3.10.1. Administration of data collection tool

The questionnaire was collected online using Google Forms. A self-completion questionnaire is defined as a self-supervised, execution and administered questionnaire, which targeted respondents complete by themselves on their own without the intervention

of the researcher (Regmi *et al.,* 2016). A link was sent to the selected and targeted employees using emails and WhatsApp.

The respondents had an option to accept to take part in the survey or not as participation was voluntary. The online survey was designed in such a way that if the respondent does not give a consent to participate in the study survey, then the survey automatically closes. Each respondent was given five days to complete the questionnaire and return it; however, late submissions were allowed for a period of 20 days (Saunders & Bezzina, 2015).

Data collection is the process of gathering and measuring information on variables of interest, in an established systematic fashion that enables one to answer stated research questions, test hypotheses, and evaluate outcomes (Efstathiou, 2019). As explained in the first chapter, a self-administered questionnaire would be distributed. This method was chosen because it is quick and effective. Online data collection may be limited by the fact that not all respondents have access to internet, and some may be wary of divulging information online.

In this study, the measuring instrument that was used is a questionnaire with close-ended questions. The questions provided respondents with predefined answer options to choose from; the questions had predefined values on a fixed scale. The research questionnaire entails four sections, namely:

1. What is the nature of employees working at Dr JS Moroka Local Municipality?
2. What are the safety regulations applicable to employees of local municipalities in South Africa?
3. What role do stakeholders play in the implementation of safety regulations at the Local Municipality level in South Africa?
4. What are the challenges faced by stakeholders in the implementation of safety regulations at the Dr JS Moroka Local Municipality?

3.11. Validity and reliability

Hollweck (2015) emphasised Yin (2014), who stated that the quality of the study design regarding validity and reliability must be ensured. In so doing, reliability and validity tests were conducted. According to Leedy and Ormrod (2019), reliability is the extent to which the measurement instrument yields consistent information about the characteristics being

assessed, while validity is the extent to which a measurement instrument accurately measures the characteristic it is intended to measure and enables justifiable inferences about the characteristics. Reliability was achieved by firstly pilot testing the instrument to ensure that the questions were clear and concise and were not ambiguous, double-barrelled, or not clear and that they are measuring one piece of information at a time. Next, the internal consistency of the instrument was measured using Cronbach's alpha. Internal consistency is a measure of reliability that examines the unidimensional nature of a test (Salkind, 2018). The guidelines proposed by Jain and Angural (2017) were used to assess the reliability of the instrument.

Validity utilised face validity and content validity. Face validity is a type of validity where a scale's content analysis logically appears to reflect what was intended to be measured, while content validity is the degree to which a measure covers the breadth of the domain of interest (Quinlan *et al.,* 2019). In this study, the supervisor reviewed the work to determine whether the instrument was answering the objectives of the study and the researcher did a literature search to compare the constructs used by other researchers in the literature to ensure that the instrument is covering the objectives of the study.

Maxwell (2017) stated that reliability and validity are the two concepts that are utilised to value the quality of research. These concepts show how the data collection processes and data analyses was conducted (Maxwell, 2017). Furthermore, reliability is explained as the extent of consistency, uniformity and constancy with which the instrument measures an attribute. Reliability confirms whether the assessment tools used by the researcher delivers stable and coherent results; while validity, in contrast, checks "how well a test measures what it is intended to measure" (Sprent, 2019). In order to verify internal consistency in the current study cronbach's alpha has been used. Aksu and Eser (2020) mention that Cronbach's alpha calculations vary between 0 and 1; where 0 "means there is no correlation and hence no internal consistency" while 1 means that the correlation is perfect and as a result internal consistency is complete. According to Aksu and Eser (2020), an alpha score of 0.7 is acceptable.

Table 3.3 below shows all scales and subscales of the Cronbach alpha coefficients that were calculated and yielded values that are above 0.90. Therefore, it be known that the data collected from the sample is valid and reliable.

Table 3.3: Cronbach's alphas of the scales and subscales of administrative services offered to customers

Scale and subscales	Cronbach's alpha	Number of items
Nature of employees working at the Dr JS Moroka Local Municipality	0.905	7
South African safety regulations applicable to employees of local municipalities	0.955	8
The role and responsibilities of stakeholders in the implementation of safety regulations at the Local Municipality level in South Africa	0.963	6
Challenges faced by stakeholders in the implementation of safety regulations at the Dr JS Moroka Local Municipality	0.924	9

Source: Researcher's own data

3.12. Data analysis and interpretation

Here is where the data collected is epitomised and clarified in a logical and analytical thinking to motivate and shape relations, trends or patterns into variables, and therefore it is regarded as the most crucial and supreme section of the study (Birmingham & Wilkinson, 2003). Quantitative data acquired from the questionnaires was captured on SPSS. A descriptive method, such as univariate, bivariate and correlation analyses, was used to analyse the data.

Data collected from the respondents was analysed using the Statistical Package for the Social Sciences (SPSS) version 25 program, wherein the results were generated from using the accomplishments or outputs. Opie (2019) indicates that the SPSS software is a user-friendly system that makes use of simple and standard calculations to interpret and examine variables on the system and it explains the relationship in detail.

Descriptive statistics used were frequencies, means, standard deviations, and graphical presentations, such as bar charts, pie charts, histograms, and box plots.

The study endosed and approved inferential statistics which used an independent t-test, one-way analysis of variance (ANOVA), and correlation analysis (Mishra *et al.,* 2019). In order to compare views across two categorical variables, the independent t-test were used, whereas ANOVA was used when the categorical variable has more than two categories. Correlation analysis was used to determine how stakeholders' roles in safety legislations/regulations influence the level of compliance.

3.12.1. Correlation coefficient

Shah and Balaganapathy (2017) advised that correlation coefficient as per Gujarati version is a mathematical and arithmetical prediction of the robustness and strongness of the correlation betwixt the relative move of two variables. Pearson's correlation is the most commonly used correlation coefficient, which measures the linear correlation that exists betwixt two variables located in the (X) and (Y) axis, and it can not indicate non-linear relationships betwixt two variables nor differentiate betwixt dependent and independent variables. The strength of the correlation coefficient is betwixt -1 and +1. When the value is positive, it means the relationship betwixt variables is strong, while when the value is negative, again the relationship betwixt variables is weak. Also, when the value is 0, it means there is no relationship betwixt variables. The p-value of 0.05 advocates that the interrelation in the midst of variables is exceptionally crucial (Belim *et al.,* 2019).

The direction of the relationship is motivated and regulated either by a negative or a positive sign of variables movement. If the two variables increase or decrease jointly, the coefficient is positive and the line composing and constituting the slope of the correlation coefficient ascend. However, if both variables are moving in the opposite direction, where one is increasing and the other decreasing, then it will be negative, and the line of the slope descend.

As a result, when one variable changes, it does not mean it is caused or affected by the other variable. In this case, there is a need to conduct a strictly and correctly controlled experiment to establish the inspiration of the change in a relationship. Pearson correlation coefficient is sensitive to very high or very low data values and causes of such extreme values should be identified and measured errors be corrected. Some variables have a non-linear relationship, and as a result, depict a low Pearson correlation coefficient, and this does not mean there is no relationship between the variables concerned.

3.12.2. Descriptive analysis

Sprent (2019) defines descriptive statistics as a method that aids in gathering, summarising, presenting and analysing data. It helps the researcher to interpret gathered information that can either be from the entire population or portion of the population under study in a simple and meaningful manner (Sprent, 2019). Descriptive analysis does not allow the researcher to manipulate and/or make conclusions from the data that was not part of the collected and analysed or get to recommendations and conclusions concerning any hypotheses made. It is intended to describe the data as raw as it was collected without any deviation (Sprent, 2019).

The measures of central tendency and measures of spread are the two general types of statistics that are used to describe data. The measures of central tendency describe the central position of a frequency distribution for a group of data and it consists of the mean, median and mode; while the measure of spread summarises a group of data by describing how spread out the scores are, using measures such as standard deviation, range, absolute deviation, variance and quartiles. The characteristics of a variable's distribution are presented using graphs and tables to discover data (Sprent, 2019). This study used the mean to measure central tendency and standard deviation to measure how spread out the scores were. Univariate analysis studies only one variable, and does not analyse underlying causes or relations. Its main purpose is to describe by summarising and finding patterns (Denis, 2018). The researcher used univariate analysis to summarise each section of the questionnaire.

3.12.3. Bivariate analysis

Bivariate data is when research is studying two variables at the same time. It is utilised to discover whether there is a connection between two sets of values (Denis, 2018). Common types of bivariate analysis include correlation coefficients and scatter plots. Scatter plots provide a visual idea of the pattern that variables under study follow. Regression analysis, in contrast, determines how your data points are related. A correlation coefficient finds a relationship between variables by calculating values (Denis, 2018). In this study, correlation analysis was used to test the relationship between any two variables. The strength of the relationship between variables could be measured by correlation coefficient using a calculated value. The calculated value leads to a conclusion.

The most common measure of correlation in statistics is the Pearson correlation coefficient (Wang *et al*., 2016). According to Wang *et al*. (2016), the strength of a linear relationship examined between two variables can be measured using the Pearson product-moment correlation coefficient (*r).*

To appropriately use the Pearson correlation coefficient, it must first be ascertained that the association between the variables is linear. A linear association indicates that the value of the two variables is close to a straight line when drawn on a scatter diagram (Schober *et al.*, 2018). The Pearson correlation coefficient values range from +1 to -1, where a value of +1 reveals a perfect positive relationship, and a value of -1 reveals a perfect negative relationship. A value of 0 shows no relationship between the two variables under study. The Pearson product-moment correlation coefficient is unable to show the difference between dependent and independent variables, which has been cited as a disadvantage (Schober *et al.*, 2018).

3.13. Ethical considerations

Ethics are regulatory directives that are established to assist, advise and to be followed when conducting research. Research ethics are focused on what is morally conventional and unconventional when engaging with respondents or when examining the archival data (Fleming & Zegwaard, 2018). The questionnaire was uploaded on Google Forms. Prior to proceeding to answering the questions, there was a section that asked for consent to participate in the study. If the respondent consents to respond, they are directed to other sections of the questionnaire. If the respondent does not give consent, the respondent would tick the non-consent box and the process to participate ends there. The respondents voluntarily participated in the study without undue influence from the researcher.

This study was carried out during a time of hard lockdown wherein COVID-19 protocols such as social distancing, sanitising, and wearing of masks were mandatory. Therefore, an internet-based survey was followed. However, the COVID-19 caption was attached to remind respondents about the deadly pandemic. Again, there were no face-to-face interviews and exchange of hardware that contained information about the study. The respondents would access and respond to the questionnaire on their cell phones or computers. It was clearly stated and assured to all the respondents that the study does not have any hidden bad intentions in participating, as protection was guaranteed for any

possible harm, which could be physical, social, emotional, etc., which may arise during the participation and/or even after participation.

Clark-Kazak (2017) presents that respondents, as they voluntarily decided to take part in the study, should be protected from any possible fatalistic or any detrimental effects as a result of being involved in the study. From the early evaluation and inspection, it was clear that the respondents will not get hurt by voluntarily Ttaking part. Furthermore, preventative and protection steps had, therefore, be taken by not divulging the personal information such as name and surname, level of qualification, contact details, etc. As indicated in the approval letter, the study is on a minimal risk level.

During the engagement with the respondents, it was clarified to every respondent regarding the confidentiality, and it was emphasised in the manner that the identity of respondents will not be publicised, and their private information will not be divulged to anyone or any form even after the survey is concluded, in line with Protection of Personal Information Act (Act No. 4 of 2013) (Lancaster, 2017). It was also guaranteed to every respondents that their personal information and reactions to the study questionnaire will be treated confidentially and carefully for the purpose of research process. North-West University (NWU) permitted the study to be conducted by officially issuing ethical clearance (ethics clearance number: NWU-00970-21-A4). Be in possesion of the letter, the researcher engaged the office of the municipal manager to seek permission to conduct the study within DrJSMLM. Asante and Nefale (2021) warn that, it is impreritive for the researchers to solicit consent before conducting research for reasons such as, a morally and ethically tolerable mannerism and as a character of respect. This also assists to establish rapport with respondents. Appropriate authority channels were followed to permit and direct the research, as per consent from the Dr JS Moroka Local Municipality.

3.14. Chapter Summary

This is a quantitative study that used a descriptive research design to investigate the level of compliance with safety regulations at the Dr JS Moroka Local Municipality. The research design followed involved designing a closed-ended survey questionnaire that was used to collect data, of which the questionnaire was administered through online using Google Forms. Descriptive statistics were used to analyse data. Issues of validity and reliability of data were addressed in the study using appropriate measures. This study was carried out during the COVID-19-induced lockdown and all protocols were followed.

CHAPTER 4

DATA INTERPRETATION AND RESULTS PRESENTATION

4.1. Introduction

The preceding chapter provided the research methods followed to achieve the research objectives. In this chapter, results are analysed and presented using tables and graphs. This is done on each section of the questionnaire, containing vital information about compliance with occupational safety regulations in the Dr JS Moroka Local Municipality. The first section presents respondents' demographic details, and other subsequent information follows thereafter. A summary of the research findings is presented last.

Section A: Demographic details of respondents

4.2. Gender

Figure 4.1 below shows the gender distribution of respondents in the study. More females, at 51% (19) participated than males, who were 49% (18). Gender is an essential variable because perceptions, attitudes, and beliefs are determined by gender. In this case, men's perceptions of safety compliance are likely to differ from women's. Gender also influences the compliance and enforcement of the safety of employees at the workplace.

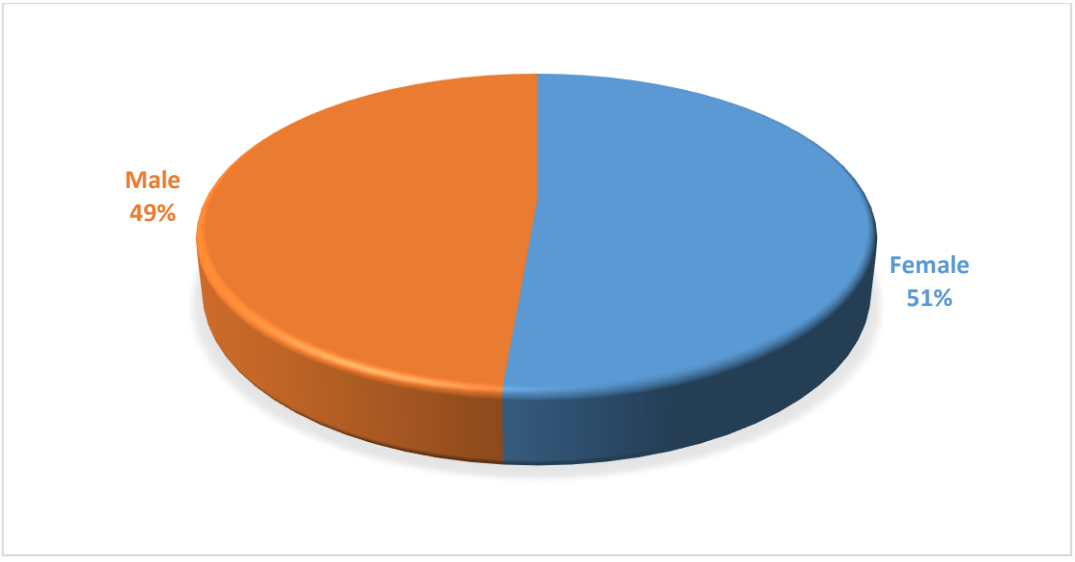


Figure 4.1: Gender distribution of respondents (Source: Researcher's own data)

4.3. Age

Figure 4.2 shows the age distribution of respondents. Ages range between 18 years and 65 years, which is the retirement age. Twenty-seven (27%) percent of the respondents were between 18 and 30 years, and the largest group (40.5%) was 30 to 39 years of age. Twenty-seven (27%) percent were between 40 and 49 years of age, and 5.4.% were between 50 and 59 years. The age of respondents is important because perceptions of safety are related to the number of years one has survived.

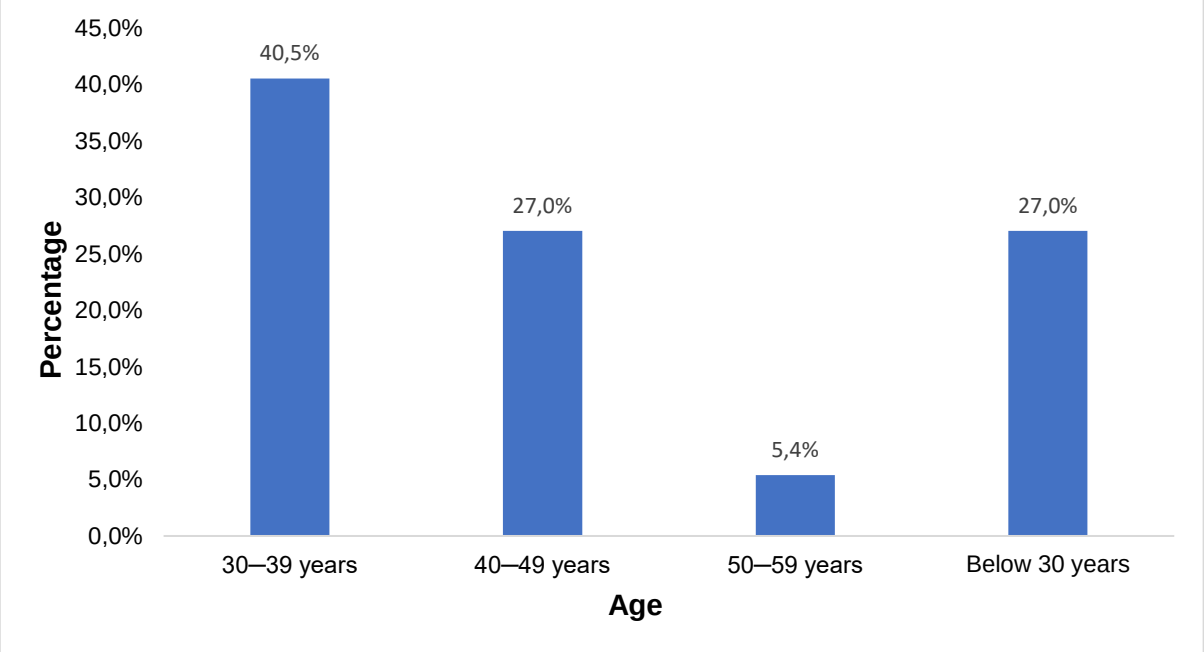


Figure 4.2: Age distribution of respondents (Source: Researcher's own data)

4.4. Level of education

Respondents of this study had different levels of education, but the lowest level was below grade 11. Below is Figure 4.3, which presents that the majority (32%) of the respondents attained a Bachelor's degree National Qualifications Framework (NQF) level 7 as their highest qualification, followed by those with a diploma (NQF Level 6), which is 30%. Thirteen and a half percent (13.5%) of the respondents attained an honours degree or post-graduate diploma. Respondents with certificates graded at NQF level 5 were 10.8%, whereas those with matric were 8.1%. The least qualified, comprising 5% of the respondents, attended school up to grade 11. The safety of employees is critical regardless of the level of qualification. However, those with higher levels of education are likely to have in-depth knowledge of safety issues compared to those who are not educated, hence safety

information dissemination should target those with little education and who are exposed to risk.

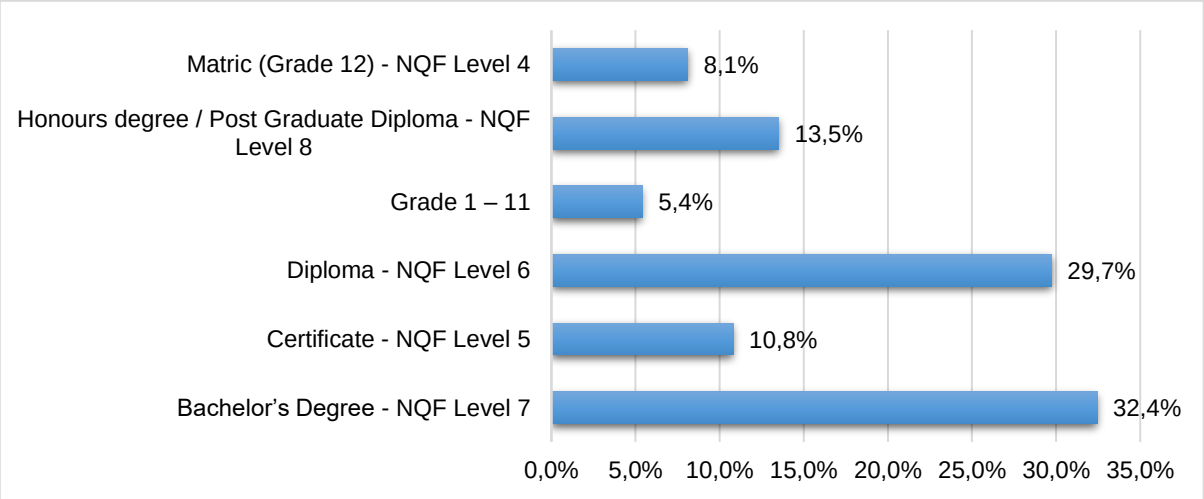


Figure 4.3: Level of education of respondents (*Source: Researcher's own data)*

4.5. Departments (workstation) of respondents

Figure 4.4 indicates the various departments where the respondents are stationed at in their workplace. About 5.4% of the respondents worked in the Municipal Manager's office, while the most significant proportion (43.2%) worked in the Department: Technical Services. The Department: Community Development Services were represented by 21.6% of the respondents, and 10.8% belonged to the Department: Budget & Treasury/Finance, which deals with the budget and finance of the Dr JS Moroka Local Municipality. Only 18.9% were from the Department: Admin and Corporate Services. According to the distribution of responsibilities, the OHS function/s falls within the Department: Admin & Corporate Services in the municipality. However, it is not spelt out because of its overlapping effect on other departments, while Department: Technical Services and Community Development Services comprises high exposure to risk, and employees are often tasked to work without adequate knowledge of safety issues. These two departments are exposed to increased risk in units such as wastewater (sanitation), water treatment (purification plant), fire, disaster management, waste and environment, roads and storm water, electricity, etc., (Mazhar *et al*., 2020, Ma & Hipel, 2016). At the municipality, the safety regulations are aligned with the newly amended labour laws, but there is a need to scrutinise the practice to ensure compliance.

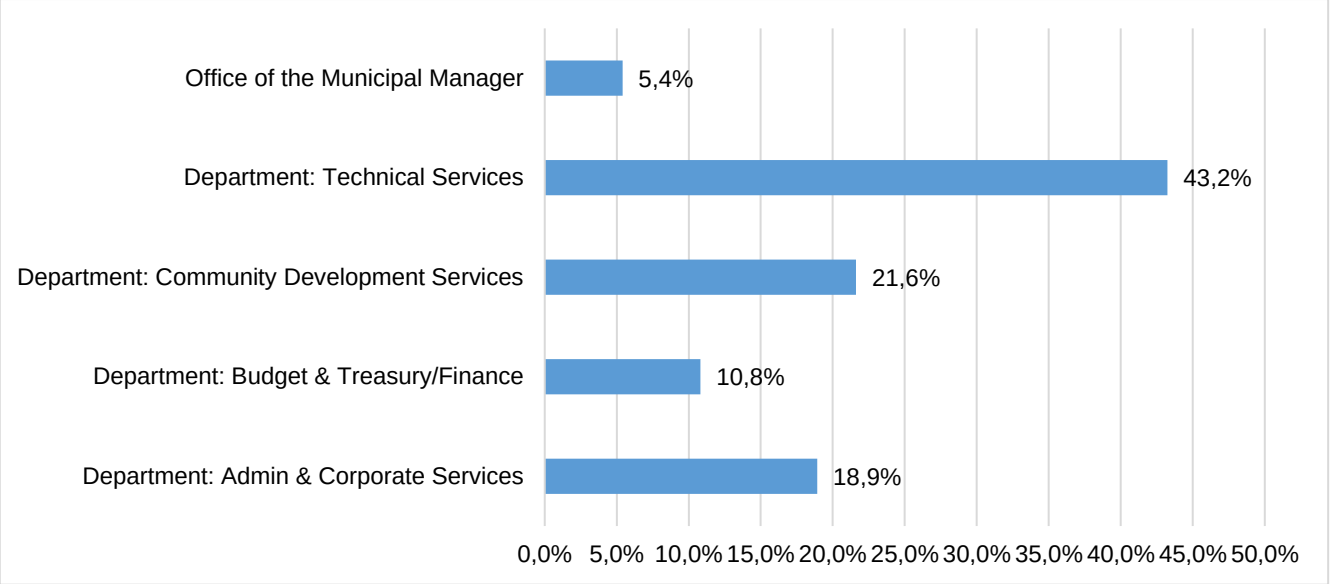


Figure 4.4: Departments (workstation) of respondents (Source: Researcher's own data)

4.6. Work experience

This refers to the duration one has been performing a specific task at the workplace. Figure 4.5 below depicts years that one has worked at the Dr JS Moroka Local Municipality. Majority of respondents, at 27%, had more than 10 years' of experience, and another 27% had six to nine years' of work experience. About 21.6% of the respondents had four to five years' experience, while 16.2% had two to three years' work experience. Only 8.1% of the respondents had less than one year of working experience with the Municipality. Work experience is crucial for developing a safe culture at the workplace. With the most significant proportion of respondents having more than 10 years of working experience at the municipality, they have developed a good safety culture that embraces the RSA Constitution and other relevant and related regulatory instruments (RSA Constitution, 1996). If the culture of safety is not yet embedded in the daily operations, there is likely to be resistance to new safety practices because the most significant number of employees are susceptible to reverting to their old style of conducting their work. At Dr JS Moroka Local Municipality, safety is a pertinent issue that requires employee reorientation. Orozco (2022) testifies that reorientation of employees plays a vital role in shaping the professional path of new talent, providing stability and confidence, and creating an opportunities for existing employees, as it also contributes to preserve and transmit the accumulated knowledge of experienced municipal employees.

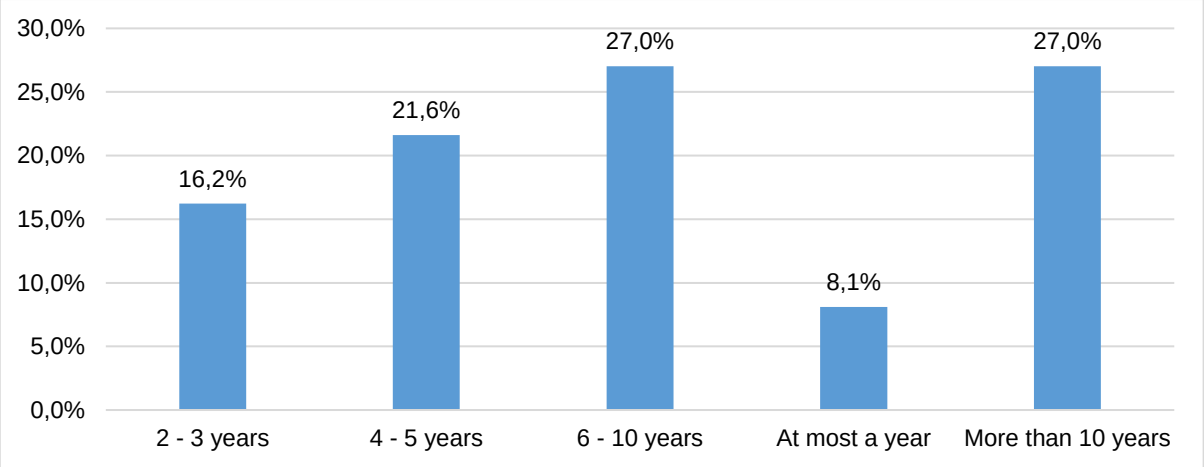


Figure 4.5: Work experience of respondents (Source: Researcher's own data)

4.7. Level of communication

This section asked questions regarding the level of communication at the Dr JS Moroka Local Municipality. Communication is one of the critical aspects of implementing safety regulations in the workplace (Coffelt *et al.,* 2019). In this study, intra-communication between employees at various levels and extra-communication between the municipality employees and outsides individuals were investigated.

4.7.1. Frequency of communication with the Municipal Manager

The Municipal Manager is the Chief Liaison Officer responsible for ensuring that all operations are performed according to the legal requirements through effective communication. A high number of the respondents, at 37.8%, stipulated that they communicate with their manager daily, while 8.1% stated that they communicate with their manager monthly. About 13.5% indicated that they communicate with the manager weekly. About 29.4% and 10.8% make very little contact and have no contact with the manager. In aggregate, a proportion of employees at the DR JS Moroka Local Municipality do not have frequent communication with their managers, which negates compliance with safety requirements. Safety instructions should flow from managers to employees without any form of hindrance. Figure 4.6 below shows the bar graph on the level of communication between employees and managers.

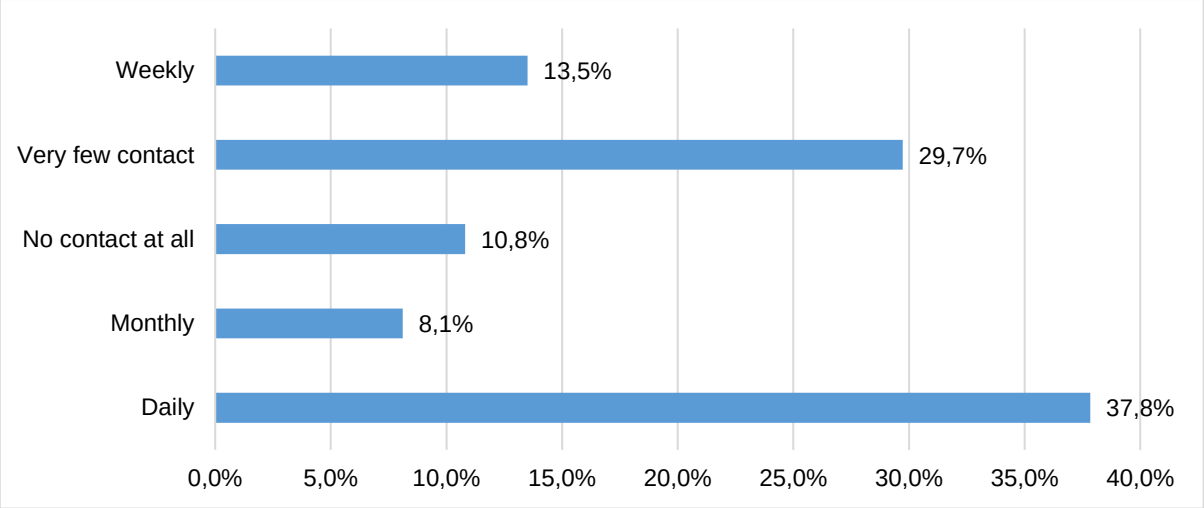


Figure 4.6: Level of communication with Managers (Source: Researcher's own data)

4.7.2. Communication with health and safety personnel

The level of communication of employees with health and safety personnel at the Dr JS Moroka Local Municipality is shallow. This was indicated by 32.4% who reported that they make very little contact with health and safety personnel, while 18.9% do not have any contact. About 16.2% communicate with the health and safety personnel weekly and monthly. Reese (2018) advised that OHS personnel should always advise employees to adhere to safety requirements, emphasising compliance benefits to individual employees and the organisation.

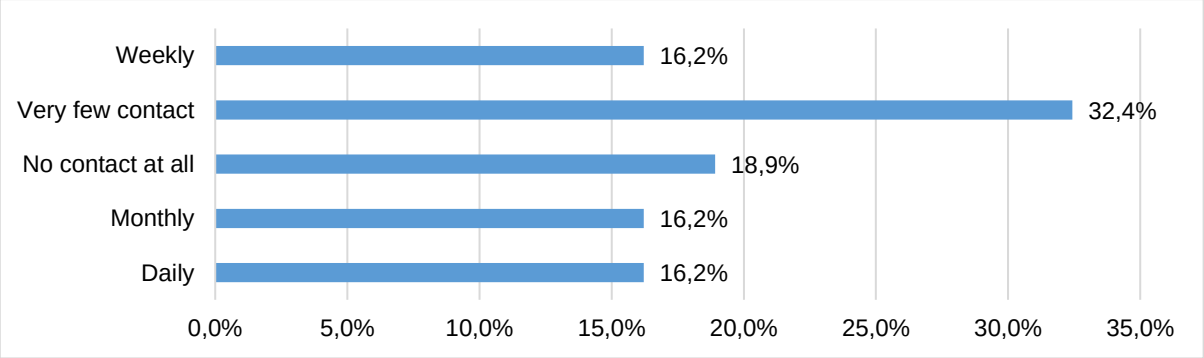


Figure 4.7: Frequency of communication between employees and health and safety personnel (Source: Researcher's own data)

4.7.3. Training in occupational health and safety

The figure below shows the portion of respondents who have attended training in health and safety. Majority, which is at 61%, never received training on health and safety, while 29% indicated that they were trained. Only 10% did not know. Training in health and safety needs

to be incorporated during employee orientation as it further increases compliance (Ricci *et al.,* 2016, Paganelli *et al*., 2018). The training should be offered on a yearly basis, especially to employees in the Department: Technical Services and Community Development Services, as well as safety reps.

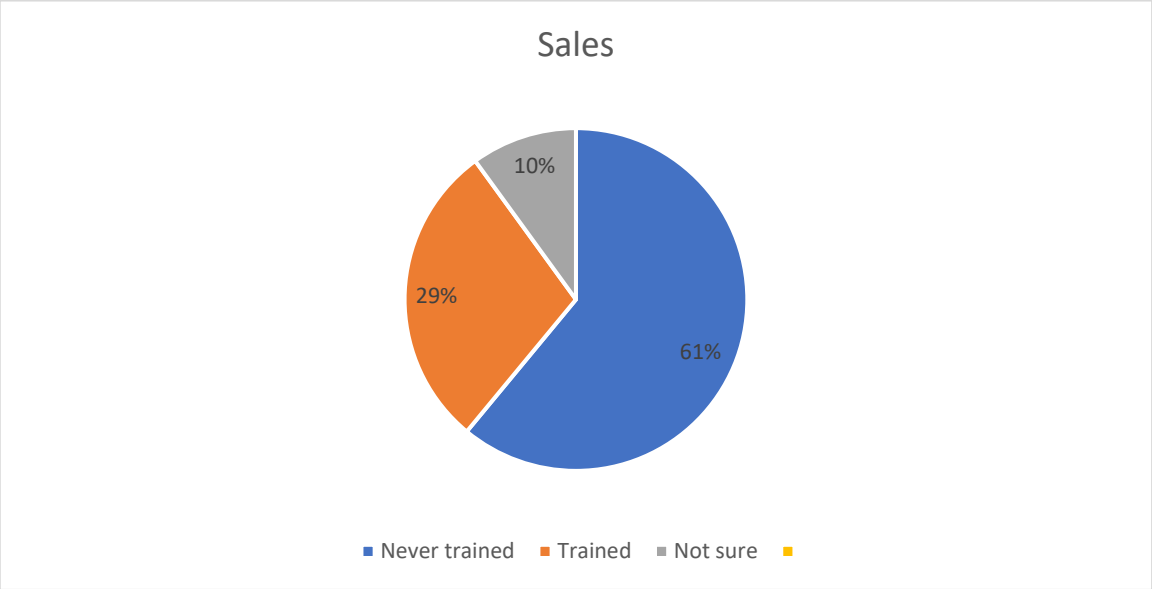


Figure 4.8: Training on occupational health and safety (Source: Researcher's own data)

4.8. Reliability

Reliability analysis was conducted to assess whether the measurement instrument (questionnaire) is reliable in producing the intended results. The reliability test was performed using the Cronbach's alpha test, and the results are presented in the table below. With N=81(variables considered) and a Cronbach's alpha (α=0.881), the results indicate a very strong internal consistency among the variables. The measurement instrument can therefore be regarded as reliable.

Table 4.1: Reliability

Cronbach's alpha	Number of variables
0.887	81

Source: Cronbach's alpha

4.9. Validity

The test for the validity of results was conducted using the Kaiser-Meyer-Olkin measure of sampling adequacy. The results show that the instrument was valid, including all variables tested with a 57% level of significance and an approximate chi-square of 85.38 and 80 degrees of freedom. The results were congruent with Bartlett's test of sphericity, which measures the sampling accuracy.

Table 4.2: Bartlett's test of sphericity

Kaiser-Meyer-Olkin measure of sampling adequacy	Approx. Chi-Square	df	Sig.
0.570	85.38	80	0.00

Source: Bartlett's test of sphericity (Kaiser-Meyer-Olkin measure of sampling adequacy)

4.10. Level of safety awareness

The table below provides a summary of results obtained using the Likert scale on safety awareness at the Dr JS Moroka Local Municipality. The questions ranged from strongly agree to disagree strongly. About 37.8% strongly agreed that safety accidents are preventable if correctly implementing regulations. Another 37.8% also agreed, while only 8.1% were neutral. Only 10.8% and 5.4% disagree and strongly disagree with the notion that safety accidents are preventable at the workplace, if safety regulations are implemented correctly. The result conforms to the general saying that prevention is better than cure. About 24.3% strongly agreed with the notion that management should ensure that all employees receive appropriate training before risky tasks, and another 35.1% also agreed. Only 18.9% of the respondents were neutral, while 13.5% and 2.7% disagreed and strongly disagreed, respectively. Although employees are assumed to have acquired basic safety knowledge, management is responsible for ensuring that every workforce member receives thorough training on safety (Ricci *et al.,* 2016, Paganelli *et al*., 2018).

Table 4.3: Level of safety awareness

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Std. dev
Safety accidents are preventable in the workplace if regulations are implemented correctly	14 (37.8%)	14 (37.8%)	3 (8.1%)	4 (10.8%)	2 (5.4%)	2.08	1.187
Management ensures that all employees are properly trained on how to perform every task safely and efficiently	9 (24.3%)	13 (35.1%)	7 (18.9%)	5 (13.5%)	1 (2.7%)	2.30	1.077
Employees are aware that it is their responsibility to report breaching of safety regulations by employer	11 (29.7%)	14 (37.8%)	8 (21.6%)	2 (5.4%)	2 (5.4%)	2.19	1.101
Employees like to be involved in the safety decisions that affect them	12 (32.4%)	20 (54.1%)	3 (8.1%)	1 (2.7%)	1 (2.7%)	1.89	0.875
Municipal management is not necessarily responsible for safety in the workplace	1 (2.7%)	6 (16.2%)	2 (5.4%)	16(43.2%)	12(32.4%)	4.00	1.134
Safety awareness is not automatically attributed to the workforce but must be carefully developed if employers truly care	8 (21.6%)	17 (45.9%)	3 (8.1%)	4 (10.8%)	5 (13.5%)	2.49	1.325

Safety is a process employed to prevent accidents	18 (48.6%)	17 (45.9%)	1 (2.7%)	0 (0.0%)	1 (2.7%)	1.62	0.794
, etc	24 (64.9%)	12 (32.4%)	0 (0.0%)	0 (0.0%)	1 (2.7%)	1.43	0.765

Source: Researcher's own data (SPSS)

Most respondents (29.7%) strongly agreed that employees are aware that they are responsible for reporting any form of breaching of safety regulations by employers. This was further supported by another 37.8% who also agreed, while 21.6% were neutral, 5.4% and another 5.4% disagreed and strongly disagreed with the notion. Overall, the employees should have adequate knowledge of their right to safety at work to remind the employer of any form of negligence. When asked about their willingness to participate in decisions concerning their safety, most of the respondents (32.4%) strongly agreed that they wanted to be involved in decision-making and another 54.1% agreed. Only 8.1% were neutral about decision-making on safety matters, while smaller group, comprising 5.4%, disagreed. Unlike many other issues, safety matters directly affect workers, especially those are involved in the day-to-day risky working environment.

Most of the respondents at 43.2% and 32.4% disagreed and strongly disagreed with the notion that municipal managers are not responsible for their safety. Only 16.2% and 2.7% disagreed and strongly disagreed, respectively, while 5.4% were neutral. While managers are responsible for safety, safety goes further to the attitude of individual employees subjecting themselves to risky working environments. About 21.6% and 45.9% strongly agreed and agreed that safety awareness is not automatically attributed to the workforce, but must be carefully developed if employers truly care. Only 8.4% were neutral, while 10.8% and 13.5% disagreed and strongly disagreed. Curcuruto *et al*. (2016) contend that employees expect the employer to orientate them on safety issues regarding their work and the potential course of action to take when in danger. Most of the respondents (64.9% and 32.4%) strongly agree and agree, respectively, that safety is the art of controlling the exposure and/or hazards that could cause personal injury, death, and property damage. As much as safety is understood in this way, it is crucial to consider that implementing good workplace safety practices is critical.

4.11. Current safety practices at Dr JS Moroka Local Municipality

This section focused on assessing the current safety practices at the Dr JS Moroka Local Municipality. Results show that the municipality has good practices for the safety of its employees. Most of the respondents, at 24.3% and 48.6%, strongly agree and agree, respectively, that the municipality offers PPE/C to employees who qualify for it for free as per OHSA (OHSA, 1993). Only 16. 2% were neutral, while 2.7% and 8.1% strongly disagreed and disagreed, respectively. This means that the municipality is responsible for the safety of its employees. The table below summarises the responses regarding the current safety practices at the municipality under study.

Table 4.4: Summary of the responses regarding the current safety practices at the municipality under study.

	Strongly Agree	**Agree**	**I do not know**	**Disagree**	**Strongly Disagree**	**Mean**	**Std.dev**
The municipality offer PPE/C to employees who qualifies for it for free as per OHS Act	9 (24.3%)	18 (48.6%)	6 (16.2%)	3 (8.1%)	1 (2.7%)	2.16	0.986
There are safety signages in all municipal facilities	1 (2.7%)	13 (35.1%)	13 (35.1%)	9 (24.3%)	1 (2.7%)	2.89	0.906
There is an evacuation, floor plan, emergency exits and assembly points and emergency kits in the municipal buildings	2 (5.4%)	11 (29.7%)	11 (29.7%)	9 (24.3%)	4 (10.8%)	3.05	1.104

There are fire extinguishers in place and are installed, replaced, and maintained yearly as well as drillers and sprinklers	1 (2.7%)	16(43.2%)	9 (24.3%)	7 (18.9%)	4 (10.8%)	2.92	1.090
Appointed Health & Safety committee members	3 (8.1%)	15 (40.5%)	2 (5.4%)	5 (13.5%)	2(5.4%)	2.68	1.002
Conduct medical surveillance yearly	3 (8.1%)	9 (24.3%)	12 (32.4%)	9 (24.3%)	4 (10.8%)	3.05	1.129
Eat/smoke in designated areas	0 (0.0%)	8 (21.6%)	7 (18.9%)	14(37.8%)	8 (21.6%)	3.59	1.066

Source: Researcher's own data (SPSS)

Respondents were asked whether there are safety signs in all municipal facilities and responses are as follows; only 2.7% strongly agreed and 35.1% agreed, while another 35.1% were neutral. About 24.3% disagreed and 2.7% strongly disagreed. The results show that safety signages are present at the municipality premises, but are not visible to others. Safety signs are reminders of the commitment to safety at the workplace. However, they should be supported by providing physical safety materials to employees. Results regarding the viability of safe spaces such as emergency exit panels and assembly points show that only 5.4% strongly agreed and 29.7% agreed with 29.7% neutral. About 24.3% and 10.8% disagreed and strongly disagreed, respectively, with the notion that there are an evacuation plan, floor plan, emergency exits, assembly points and emergency kits in the municipal buildings (Renschler *et al*., 2016). Every office site must have an evacuation passage, a floor plan and an emergency exit. However, safety should not just end at the offices because some of the most dangerous operations such as waste, environment, water and sewer

treatment, are performed outside the premises. Therefore, safety kits should be available to all members who carry out their duties outside the municipal premises.

On the availability of fire extinguishers, drillers, and sprinklers, only 2.7% strongly agreed, while most of them (43.2%) agreed, with 24.3% neutral. About 18.9% disagreed and 10.8% strongly disagreed. The results show that a more significant percentage of respondents notice the physical safety structures required for the safety of premise users (Sielicka *et al.,* 2020), while a smaller proportion seems not to know such essential safety areas, as managers and peers must orientate others about the availability and use of such essential safety assets. Most respondents, 37.8% and 21.6%, disagreed and strongly disagreed, respectively, with the notion that there are areas designated for eating or smoking in the municipality. Suryani and Suhartini (2018) advised that having these areas helps to reduce the risk of fire caused by smoking.

Most of the respondents 8.1%, strongly agreed and 40.5% agreed, that there is a health and safety committee at the municipality. Only 5.4% were neutral and 13.5% disagreed that there is an H&S committee in the municipality. Health and safety committees are important for enforcing safety regulations for both managers and employees (OHSA, 1993). Employees have tendencies of neglecting safety protocols while at work, while managers may not be willing to issue safety materials for employees, which exacerbates the risk of harm to frontline employees. The rules require that the OHS officer/ safety manager/safety supervisor be employed to ensure that they lead and advise H&S committees in implementing safety measures at the workplace. Health and safety personnel are essential for conducting safety surveillance annually at the workplace.

4.12. Implementation of safety issues at the municipality

The table below shows the responses on implementing safety issues/measures in the Dr JS Moroka Local Municipality. The principal actors implementing safety issues are health and safety personnel who should advise and interact with the Municipal Managers and employees. Most responses shows that 5.4% and 32.4% strongly agree and agree, respectively, which indicates that there is an active occupational health and safety committee in the municipality in line with sec 19 of OHSA (OHSA, 1993). A significant proportion of about 27% did not know of any functional occupational health and safety committee. About 24.3% and 10.8% disagree and strongly disagree, respectively.

In most instances, employees who lack knowledge of such important structures need to be re-oriented to know their right to safety at work. Most of the responses show that respondents are aware of the municipal managers and health and safety personnel's role in establishing and improving procedures for employees to report safety hazards. About 2.7% strongly agreed and another 29.7% agreed that the managers and occupational health and safety committee plays a critical role in establishing procedures for employees to report safety hazards. A significant proportion of about 37.8% did not know that the municipal manager, the health and safety committee and occupational health personnel exist to improve procedures for the employee to report safety hazards. Only 24.3% disagree, and another 5.4% strongly disagree. Municipal managers, the OHS committee, and occupational health and safety personnel are responsible for implementing safety regulations and can also encourage employees to suggest improvements without fear of reprisal

Table 4.5: Implementation of safety issues at the municipality

	Strongly agree	**Agree**	**I do not know**	**Disagree**	**Strongly disagree**	**Mean**	**Std.dev**
There is an active occupational health and safety (OHS) committee	2 (5.4%)	12 (32.4%)	10 (27%)	9 (24.3%)	4 (10.8%)	3.03	1.118
Management (Municipal Manager), council, and Occupational health safety personnel establish or improve procedures for employees to report safety hazards or suggest improvements without fear of reprisal	1 (2.7%)	11 (29.7%)	14 (37.8%)	9 (24.3%)	2(5.4%)	3.00	0.943
The municipality management responded to concerns raised by workers and the Department of	3 (8.1%)	6(16.2%)	16 (43.2%)	8 (21.6%)	4 (10.8%)	3.11	1.075

Employment & Labour (DEL)'s inspector/s							
OHS Practitioner and management recommended training for employees, supervisors, and managers and refresher training on H&S practices, procedures, and emergency response	1 (2.7%)	7 (18.9%)	16 (43.2%)	13(35.1%)	0 (0.0%)	3.11	0.809
Skills Development Facilitator (SDF) to plan and organize training programs relating to safety	3 (8.1%)	10 (27%)	12 (32.4%)	8(21.6%)	4 (10.8%)	3.00	1.130
Management and the committee establish procedures for reviewing reports of all safety incidents, including accidents, illnesses, and deaths, and it is approved by management and council	2 (5.4%)	11 (29.7%)	14 (37.8%)	7 (18.9%)	3 (8.1%)	3.00	1.026
OHS Practitioner, together with the committee, develop systems to report accidents and "near misses" in line with DEL guidelines and Acts	2 (5.4%)	11 (29.7%)	14 (37.8%)	7 (18.9%)	3 (8.1%)	3.00	1.026

Source: Researcher's own data (SPSS)

Most of the respondents, which makes 43.2%, indicate that they do not know that management responds to safety concerns raised by workers and the Department of Employment and Labour. This may mean that safety issues are never raised at the municipality. Only 8.4% strongly agree and another 16.2% agree that the municipal managers respond to safety issues. In contrast, 21.6% disagree and 10.8% strongly disagree with the notion that municipal managers respond to safety concerns by employers and the DEL. This statistic is critical, and this lack of zeal to solve safety issues is worrisome.

About 43.2% did not know that the occupational health and safety officers and managers recommended training for employees, supervisors and refresher training on health and safety practices, procedures, and emergency response. This is a significant statistic, but it has little bearing because recommendations are usually given to managers without the knowledge of employees. However, 2.7% strongly agree, and 18.9% agree that they are receiving the recommendation/s and only 35.1% disagree. Acting on recommendations is a good gesture when implementing safety issues, especially training of employees.

Most respondents (37.8%) did not know that management and the OHS committee established procedures for reviewing reports of all safety incidents, including accidents, illnesses, and deaths to DEL (OHSA, 1993). Establishing procedures for reviewing reports of all safety incidents is done at the managerial level, and it is rare for such information to cascade to lower-level employees. However, 5.4% strongly agree, and another 29.7% agree that such activities occur at the managerial level. Only 18.9% disagree and 8.1% strongly disagree. These results indicate that managers are committed to implementing safety regulations from the Department of Employment and Labour.

Most respondents (37.8%) did not know that the OHS officer and the committee developed systems to report accidents and ‘near misses’ in line with DEL guidelines and related legislations/acts. Developing strategies to report accidents and ‘near misses’ in line with DEL guidelines and legislation is done at the managerial level, and there is no harm in not being privy to such information. However, a significant proportion of respondents, 5.4%, strongly agree and another 29.7% agree. Only 18.9% disagree and 8.1% strongly disagree. These results are congruent with the previous findings.

4.13. Challenges affecting the implementation of safety regulations

Results show many challenges affecting the implementation of safety regulations in the Dr JS Moroka Local Municipality. Most of the respondents (45.9%) agree and another 8.1% strongly agree that lack of regular inspections, internal audits and from the DEL inspectors affects the implementation of safety regulations (Ferronato & Torretta, 2019). Only 15% did not know and 5.4% disagree that lack of regular inspections and audits internally and from DEL limits the implementation of safety regulations at the municipality. Regular internal audits are crucial for identifying safety gaps and they help identify risky areas that require immediate attention. Internal audits of safety issues are important to institute preventive measures for the safety of employees (Jespersen *et al.,* 2016).

About 45.9% and 13.5% agree and strongly agree with the notion that poor management and supervision of risky operational areas limit the effective implementation of safety regulations. Only 21.6% did not know and 16.2% and 2.7% disagree and agree with the idea that there is poor supervision in the municipality (Adugna, 2015).

Most of the respondents (45.9%) disagree and 8.1% strongly disagree that the lack of personal protective clothing like gloves affects the implementation of safety regulations (Reddy *et al.*, 2019). Only 16.2% did not know and 21.6% and 8.1% agree and strongly agree, respectively, that the lack of personal protective clothing affects the implementation of safety regulations. Most respondents (51.4% and 10.8%) agree that a lack of training in occupational safety, risk awareness, and related issues affects the implementation of safety regulations. Only 18.9% did not know and another 18.9% disagree. According to Bhole (2016), lack of training leads to a low level of awareness about safety concerns. As a result, management is reluctant to implement safety regulations.

Most of the respondents (45.9%) did not know that the municipality does report accidental incidents to the Department of Employment and Labour (Arnetz *et at.*, 2015). About 29.7% and another 2.7% disagree and agree, respectively, that the failure of the municipality to report the accident to the DEL affects the implementation of safety regulations. Only 16.2% and 5.4% agree and disagree, respectively, that the municipality's failure to report the accidents to DEL limits the implementation of safety regulations at the Dr JS Moroka Local Municipality. Reporting accidents to higher regulatory bodies invites audits that will identify loopholes in implementing safety regulations. However, the municipal manager should liaise with the DEL and report any faulty issues to ensure that risks are mitigated before manifesting into hazards.

Table 4.6: Challenges affecting the implementation of safety regulations

	Strongly Agree	**Agree**	**I do not know**	**Disagree**	**Strongly Disagree**	**Mean**	**Std.dev**
Lack of regular inspections and audits internally and from the DEL inspectors.	3 (8.1%)	17 (45.9%)	15 (40.5%)	2 (5.4%)	0 (0.0%)	2.43	0.728
Poor management/supervision.	5 (13.5%)	17 (45.9%)	8 (21.6%)	6 (16.2%)	1 (2.7%)	2.49	1.017

and lack of management buy-in in relation to safety matters.							
Lack of protective clothing like gloves, etc	3 (8.1%)	8 (21.6%)	6 (16.2%)	17(45.9%)	3 (8.1 %)	3.24	1.140
Lack of training in occupational safety, risk awareness and other related	4 (10.8%)	19 (51.4%)	7 (18.9%)	7 (18.9%)	0 (0.0%)	2.46	0.931
Municipality not reporting accidental incidents of employees at the workplace to DEL	2 (5.4%)	6 (16.2%)	17 (45.9%)	11(29.7%)	1 (2.7%)	3.08	0.894
Enough budget allocated for safety related issues	0 (0.0%)	5 (13.5%)	18 (48.6%)	8(21.6%)	6 (16.2%)	3.41	0.927
Dedicated, customised, and modified transportation for safety matters	0 (0.0%)	4 (10.8%)	10(27%)	16(43.2%)	7(18.9%)	3.70	0.909
Non-adherence to safety regulations, such as OHS Act, ILO conventions and etc	3 (8.1%)	14 (37.8%)	14 (37.8%)	2 (5.4%)	4(10.8%)	2.73	1.071
Delay in procurement process for safety items (PPE/C)	9 (24.3%)	20 (54.1%)	4 (10.8%)	3 (8.1%)	1 (2.7%)	2.11	0.966

Source: Researcher's own data (SPSS)

Most of the respondents (48.6%) did not know that lack of a budget to for cover safety issues limits the implementation of safety regulations. About 21.6% and 16.2% disagree and strongly disagree, respectively. Only 13.5% agree that lack of budget limits the implementation of safety regulations. In practice, there is a specific budget item for OHS but not effectively used to comply with safety regulations. Awwad *et al*., (2016) aver that most of the operations items are inclusive of safety, which augurs well with the fact that most of the respondents did not know that the lack of budget affects the implementation of safety

regulations. A budget that adequately covers all the municipality needs helps procure all safety materials without delay.

The lack of adequate customised transportation of safety goods affects the implementation of safety regulations. Most of the respondents, at 43.2% and 18.9% disagree and strongly disagree, respectively, that the lack of customised transportation for safety purposes affects the implementation of safety regulations. Only 27% did not know and 10.8% agree. Suhardono (2022) maintains that the availability of customised transportation is important because such machinery is dedicated to reducing the risk of accidental death (Janno & Koppel, 2017).

Most of the respondents, at 37.8%, agree, and 8.1% strongly agree that non-adherence to safety regulations, such as OHS Act and ILO conventions, affects the implementation of safety regulations. About 37.8% did not know and 5.4% and 10.8% disagreed that non-adherence to safety regulations affects implantation safety regulations. Aschner *et al*., (2016) submit that non-adherence emanates from lack of knowledge of these safety regulations, which is a barrier to their implementation.

4.14. Consequences of failure to adhere to safety regulations.

According to Dekker and Breakey (2016) failure to adhere to safety regulations attracts negative consequences to both employers and employees. The table below indicates the results of the effects of failure to adhere to safety regulations. Most of the respondents (86.5%) did not know that the municipality incurred financial penalties due to failure to adhere to safety regulations. About 10.8% disagree, and 2.7% strongly disagree that the municipality incurred financial penalties. This means that the lack of financial consequences for failure to adhere to safety regulations puts employees at risk because there will be no financial obligation attributable to the loss incurred. The burden of loss inevitably falls on employees. The results show that 43.2% did not know that management has charged certain employees for not complying with the safety regulations, while 10.8% agree. Setting employees depends on the frequency of breach and the extent of negligence by the employee. About 29.7% disagree and 16.8% strongly disagree that management has charged certain employees for failure to adhere to safety regulations.

Most of the respondents (56.8%) did not know that management has lost current or potential staff due to the municipality being an unsafe and unconducive workplace. However, 13.5% agree and 5.4% strongly agree that management has lost current and potential staff due to

the municipality being an unsafe and unconducive workplace. Only 18.9% and 5.4% disagree and strongly disagree, respectively. Current and potential employees are attracted by the safety of the workplace. In an unsafe working environment, employees settle temporarily while looking at other safer places, even though they are offered less remuneration. Maintaining a safe working environment is good for employee retention (Cloutier *et al*., 2015; Salman *et al*., 2016).

Assiri (2016) advocates that failure to comply with safety regulations increases the cost of production through increased downtime and loss of goods and services caused by the workplace being unhealthy and unsafe. Most of the respondents (45.9%) agree that the management has suffered increased downtime and loss of goods and services due to unsafe working conditions at the workplace. About 40.5% did not know and only 5.4% disagree. This means there has been a lot of time and resources wasted due to the lack of safety in the workplace. This increases pressure on the budget as most of the expenditure is wasted during downtime or other goods being disposed of for being unsafe.

Most of the respondents (43.2%) did not know that the Municipal Manager was charged or may be charged with a criminal offense should the death of an employee at work occur, because of non-compliance with safety-related regulations. About 35.1% disagree and 21.6% strongly disagree. This means that the workers are responsible for their safety at the workplace. Although managers may neglect some of the rules, as it is the duty of the employee at risk to observe and protect themselves, managers are not held accountable for the loss of a worker on the grounds of failure to comply with safety regulations.

According to LRA (1995) failure to comply with safety regulations may attract disciplinary action against employees. The results in the table below show that 43.2% disagree and another 10.8% strongly disagree that some employees have appeared in front of the OHS committee and Labour Relations processes for disciplinary action due to non-compliance with safety regulations (OHSA, 1993). About 43.2% did not know of disciplinary proceedings due to failure to adhere to safety regulations.

Table 4.7: Consequences of failure to adhere to safety regulations

	Strongly agree	Agree	I do not know	Disagree	Strongly disagree	Mean	Std.dev
Municipality incurred financial penalties	0 (0.0%)	0 (0.0%)	32 (86.5%)	4 (10.8%)	1 (2.7%)	3.16	0.442
Management has charged certain employees for not complying with the Health and Safety Regulations	0 (0.0%)	4 (10.8%)	16 (43.2%)	11(29.7%)	6 (16.2%)	3.51	0.901
Management has lost current or potential staff due to the municipality being an unsafe and unconducive workplace	2 (5.4%)	5 (13.5%)	21 (56.8%)	7 (18.9%)	2 (5.4%)	3.05	0.880
There has been downtime and loss of goods and services caused by the workplace being	3 (8.1%)	17(45.9%)	15 (40.5%)	2 (5.4%)	0 (0.0%)	2.43	0.728

unhealthy and unsafe							
Manager/s, especially the Municipal Manager was charged with a criminal offense on the death of an employee at work because of non-compliance with safety related regulations	0 (0.0%)	0 (0.0%)	16 (43.2%)	13(35.1%)	8 (21.6%)	3.78	0.787
Some employees have appeared in front of OHS committee as well as Labour Relations processes for disciplinary action due to non-compliance with safety regulations	0 (0.0%)	1 (2.7%)	16(43.2%)	16(43.2%)	4 (10.8%)	3.62	0.721
Employees sign Code of conduct as per	7 (18.9%)	19 (51.4%)	8 (21.6%)	3(8.1%)	0 (0.0%)	2.19	.845

Local Government: Municipal Systems Act, 32 of 2000, Schedule 2

Source: Researcher's own data (SPSS)

4.15. Discussion

The demographic information revealed that 51% of the respondents were females and the remainder (49%) were males. The age of respondents was depicted in ranges and most of them 40.5% were in the age range of 30 to 39. However, the smallest age range employed is of youth below the age of 30. The average qualification for respondents is a diploma meaning that most employees at the Dr JS Moroka Local Municipality are literate. Although safety is crucial for every employee, as it is noted that most of the respondents above 60% are working in the service delivery departments such as Dept. Technical Service and Community Development Services, which needs more safety orientation because they are exposed to higher risks, particularly in water, wastewater, maintenance, roads and storm, waste and environment, electricity and mechanical, disaster management, etc. In total, more than 70% of respondents had more than five years of experience at work. This enhances the understanding of safety needs of employees and experienced employees can guide the newcomers on safety rules and regulation and the safety culture at the workplace.

Research objective 1: To set up the nature and character of employees working at the Dr JS Moroka Local Municipality.

Results indicate that more than 70% of employees at the Dr JS Moroka Local Municipality work in service delivery departments such as Dept. Technical Service and Community Development Services, which are exposed to high risk of danger. However, empirical evidence suggests that a lack of compliance by municipal management has a negative bearing on service delivery. Compliance is mainly affected by the nature of work breakdown and distribution as well as HR-related policies. Cloete (2016) argues that there is a lack of proper interpretation and implementation of HR policies in municipalities together with a pervasive lack of line management integration with Department: Admin & Corporate Services – Unit: Human Resources Management & Development (HRM & D) – OHS.

Therefore, it can be argued that this lack of integration between line management and the Unit: HRM & D (OHS) directly leads to a death of compliance with safety regulations in the municipality. Ijeoma and Nezwi (2016) noted that the core factors which causes appropriation for the research are weak municipal systems and processes, as well as an absent of appropriate controls towards compliance with safety legislation. So far as there is interest in 'how' an activity is done, there must be procedures to follow. This is important for finding long-lasting solutions to encourage employees to adopt a safety compliance culture at the workplace (Ndevu & Muller, 2018).

Research objective 2: To assess the safety regulations applicable to employees at municipalities in South Africa.

At the international level, the International Labour Organization is the worldwide watchdog on employment matters and South Africa has ratified most of its conventions (Stave & Wald, 2016). The international body also acts as tribunal which presides over the breaching of the employer to employee grievances including non-compliance with safety. At the local level, safety is a right stated in the Chapter 2 of Constitution of the Republic of South Africa (RSA Constitution, 1996). Zondo (2021) notes that municipal employees are protected by the Occupational Health and Safety Act, which emphasises compliance with safety regulations by both employers and employees. It is the duty of employers to provide protective materials and train employees on safety requirements at the workplace. Stave and Wald (2016) mention that the LRA, the BCEA, and the EEA add to a couple of pieces of legislative instruments that govern the safety of employees at the workplace. The Compensation of Occupational Injuries and Diseases Act further imposes the remedial action for employees who are injured in the workplace. However, Mhlanga *et al.* (2021) argue that employers push employees to work in unsafe conditions to maximise their performance, productivity and/or services.

Research objective 3: To set up the role and responsibilities of interested parties in the implementation of safety regulations at the municipalities in South Africa.

There are several stakeholders who are concerned about the safety of employees. Firstly, the central government is responsible for gazetting acts, laws and regulations that steer the application and execution of safety regulations at municipal level, while province at the divisional level have a responsibility to develop and review collective agreement/s such as agreements from provincial SALGBC. Failure to adhere to such rules costs the government

(municipalities) money through claims of injuries at the workplace or from DEL as guided by COIDA. Zwane and Matsiliza (2022) concur that the central government oversees and enforces compliance with safety rules through DEL as it delegated the responsibilities to the department's inspectors in line with sec 29 of OHSA. The municipal manager is obliged to implement the safety regulations and ensure that relevant and qualified employees are hired for a particular job. Masuku and Jili (2019) concur that managers must inspire subordinates by being accountable and responsible for their safety of which such responsibility should form part of their key performance areas (KPAs)/key performance indicators (KPIs) in the job description and also performance agreement. Nzimakwe (2022) indicates that even councillors are responsible for the safety of municipality employees as it is the responsibility of council to approve municipal policies, such as policy/ies relating to safety.

Municipal employees require that employers should adhere to the safety regulations so that they are protected and not exposed to abuse.

Wereda *et al.* (2021) argue that the stakeholders for a safe working environment include both the private and public sectors. The private sector particularly expects to be responsible for developing a mechanism for reducing risks and ease with which such risks are mitigated, while public clearly refers to all spheres of government and its parastatals. The safety of municipal employees is very important because they contribute to the development of a nation.

4.16. Chapter summary

This chapter covers the results of data analysis and interpretation in line with the level of compliance with safety regulations in the Dr JS Moroka Local Municipality, which is in the Mpumalanga Province, South Africa. The demographic details show that most employees work under service delivery departments such as Dept. Technical Service and Community Development Services, which require a no-compromise adherence to safety regulations. Most of such employees do have long working experience, but they are not regularly trained on safety-related matters, and this causes the safety culture to be very weak. Safety of employees is very important because it impacts service delivery, hence employers are encouraged to strengthen and monitor compliance with safety regulations so that the working environment becomes attractive and conducive. The next chapter provides a summary of the entire study and suggests recommendations for effective compliance with safety regulation.

CHAPTER 5

RECOMMENDATIONS AND CONCLUSION

5.1. Introduction

The focal point of this chapter is on the findings, recommendations, and conclusion. The data from the survey from the targeted employees of DRJSMLM in different hierarchical levels, which was conducted by an independent administrator, will be used to determine the findings recommendations and the conclusion of the study. The recommendations will also talk to policy development and reviewal to comply with every safety related piece of legislation in the Municipalities, Provincially, Nationally (South Africa) and globally.

5.2. Recommendations

The recommendations proposed are as per the literature review, findings of the survey, data analysis as well the municipal commitments which were not fulfilled and most have been raised by the employees, OHS committee, and DEL inspector. The municipality should first comply with its strategic objectives relating to OHS, such as to:

I. conduct a thorough risk assessment;
II. write safe work procedures;
III. have safety training records;
IV. conduct task observations;
V. provide a structured Health and Safety Management Framework to eliminate or control risks in all operations into an acceptable level;
VI. develop and embed a safety culture in all municipal activities that recognises the importance and value of effective safety management;
VII. clearly define to all employees their accountability and responsibility for the development and delivery of a safety strategy;
VIII. ensure that OHS committee members, representative and all employees are provided with adequate and appropriate health and safety information, resources, and training;
IX. empower employees to have the ability to identify hazards in the workplace, assess the level of risk associated with the hazard, and identify controls to manage the hazard;
X. monitor the implementation of internal safety and/or OHS policy and compliance;

XI. develop a municipal Occupational Safety and Health strategy at the strategic level;
XII. reviewing and develop municipal policies in line with RSA Constitution, OHSA, ILO Conventions, etc;
XIII. comply with COIDA by strengthening the relationship between the preventative and compensation legislation;
XIV. take advantage of the existing structures such as SALGBC, DEL- Compensation Fund and relevant H&S professional bodies;
XV. take advantage of the possibilities ushered by COVID-19 to promote for and implant an OHS culture across the municipality (comply with COVID-19 protocol fully);
XVI. establish and develop a joint force mechanisms with institutions, especially institutions of higher learning, to capacitate employees on OHS matters, so that the curriculum development could be responsive, relevant and tailor-made to address OHS issues faced;
XVII. ensure that the Department: Admin & Corporate Services, Unit: HRM & D (OHS) provides a systematic guide to assist all municipal departments, with a buy-in from the Municipal Manager, the whole broader management and council to effectively manage and always be on the lookout and vigilant about safety matters;
XVIII. report incident(s)/accident(s) to DEL and any relevant and related bodies/structures;
XIX. take disciplinary action for non-compliance.
XX. compliance with applicable legal and other requirements that relate to health and safety.

The municipality should always ensure that the municipal premises, buildings, facilities, and employees are complying with OHSA and municipal OHS policy by ensuring that:

I. lights are in 100% working order;
II. switches are fully functional and numbered;
III. walls are undamaged and clean;
IV. windows, wall, floors and whole are undamaged and clean;
V. furniture is undamaged and clean;
VI. ablution facilities are clean;
VII. ventilation systems are adequate;
VIII. fire extinguishers are installed, replaced and serviced in all buildings and facilities;

IX. there are floor plans, evacuation plans, assembly points, emergency exits, and appointed OHS committees and reps;
X. conducive workstation (ergonomics);
XI. all portable electrical equipment is registered and is of a required standard as per the regulation/s;
XII. chemical storages are up to standard as per the regulation/s and used properly;
XIII. adequate PPE and PPC available and ensuring that employees are wearing it, whenever at work;
XIV. safety signs in place in all offices/facilities;
XV. municipal yellow and white fleet as well as cars are in good and drivable condition with an up-to-date fitted fire extinguisher and valid disk.

5.3. Conclusion

The municipality is faced with the challenge of non-compliance to safety related legislation/s. This is due to various factors such as (but not limited to) sub-standard professional practices, insufficient supervision, a lack of implementing tools, shortage of skilled and professionally qualified staff, low quality PPE/C, non-wearing of PPE/C, inadequate infrastructure, and equipment. In dealing with these challenges, the employer should ensure that there is risk management by conducting risk assessments regularly, improving the adherence to legislations, policies and processes, better management and supervision relating to safety, improving infrastructure, data management and ensuring the adequate management of safe environment.

The RSA Constitution, under section 11 states that “everyone has the right to life”. One life is too many, especially when it is lost or risked in an environment wherein employee(s) spend the better part of their lives, as it clear that workers normally spend eight hours or more in the working environment rendering services or producing products (RSA Constitution, 1998). This is a call to all employers, including DRJSMLM, for the sake of preserving lives and ensuring the safety of its employees to ensure that there is full compliance with the OHSA and other safety-related legislation (OHSA, 1993 & RSA Constitution, 1998).

What should be done in future is a combination and working togetherness from both employer and employee(s) on a risk-based preventing strategies and safety promoting

activities. This model places a greater emphasis on recognising the socio-economic determinants of risk-safety and as a result, it will allow for a critical prevention strategy to improve the overall safety of both the employer and vulnerable employees in the municipality (OHSA, 1993)

Safety is a discipline, the same as any other discipline such as Finance, Procurement, Contractor Management, Fleet Management, HR, Stores, Operations Management, etc. Safety competence needs to be achieved in the same way as any other competence and needs to be managed. Safety leadership is a skill that can be learned.

WHY DIDN'T I? This question can only be avoided if the employer and employee can commit to full compliance with safety regulations at all the time in the workplace.

WHO GETS HURT WHEN WE DON'T FOLLOW THE SAFETY RULES IN THE WORKPLACE?

A simple and obvious answer is, victims are the spouses, children, friends, mothers, fathers, etc. This could be avoided by simply complying with safety-related legislations governing the working environment.

"If you think compliance is expensive, try non-complaince" – DEL Compensation Fund.

.

REFERENCES

Adams, V.D. 2017. *Water and wastewater examination manual*. London: Routledge.

Adugna, N.T. 2015. A study of causes of delay and cost overrun in office construction projects in the eThekwini Municipal Area, South Africa (Doctoral thesis).

Ahmad, S., Iraj, M., Abbas, M. & Mahdi, A. 2016. Analysis of occupational accidents induced human injuries: a case study in construction industries and sites. *Journal of Civil Engineering and Construction Technology*, 7(1):1-7.

Aksu, G. & Eser, M.T. 2020. Development of analytical thinking tendency scale: Validity and reliability study. *Ilkogretim Online*, 19(4).

Andola, O.C., Wakhungu, J.W. & Omuterema, S.O. 2017. Safety intervention role played by various entities in disaster risk reduction in Eldoret Municipality Industries, Kenya. *Safety*, 7(4).

Antonsen, S. 2017. Safety culture: theory, method and improvement. New York: CRC Press.

Arnetz, J.E. Hamblin, L., Ager, J., Luborsky, M., Upfal, M.J., Russell, J. & Essenmacher, L. 2015. Underreporting of workplace violence: comparison of self-report and actual documentation of hospital incidents. *Workplace Health & Safety*, 63(5):200-210.

Arthur, R., Rouf, F.A., Rahmayanti, H. & Maulana, A. 2019, December. Plumbing work competence instrument in the field of civil engineering. *Journal of Physics: Conference Series,* 1402(2):022019. IOP Publishing.

Article 23 of the Universal Declaration of Human Rights and article 7 of the International Covenant on Economic, Social and Cultural Rights

Asante, K.O. & Nefale, M.T. 2021. Substance use among street-connected children and adolescents in Ghana and South Africa: a cross-country comparison study. *Behavioral Sciences*, 11(3):28.

Aschner, M., Autrup, H.N., Berry, C.L., Boobis, A.R., Cohen, S.M., Creppy, E.E., Dekant, W., Doull, J., Galli, C.L., Goodman, J.I. & Gori, G.B. 2016. Upholding science in health, safety and environmental risk assessments and regulations. *Toxicology*, 371:12-16.

Asiamah, N., Mensah, H.K. & Oteng-Abayie, E.F. 2017. General, target, and accessible population: Demystifying the concepts for effective sampling. *The Qualitative Report*,

22(6):1607.

Assiri, W. 2016. Risk of loss of productivity in workplaces. *International Journal of Scientific and Technology Research*, 5(05).

Awwad, R., El Souki, O. & Jabbour, M. 2016. Construction safety practices and challenges in a Middle Eastern developing country. *Safety Science*, 83:1-11.

Babbie, E. 2017. The basics of social research methods, 7th ed. Cengage learning, EMEA, ISBN: 978-1-305-50307-6.

Balderson, D. 2016. Safety defined: A means to provide a safe work environment. *Professional Safety*, 61(05):63-68.

Bhardwaj, P. 2019. Types of sampling in research. *Journal of the Practice of Cardiovascular Sciences*, 5(3):157.

Barney, J. 1991. Firm resources and sustained competitive advantage. *Journal of Management*, 17(1):99-120.

Bazan-Bulanda, A. 2019. Impact of occupational health and safety regulations on the employee's decision to take up employment. 7th International Conference System Safety: Human-Technical Facility-Environment. Zakopane, Poland. CzOTO 2019, 1(1):141-148.

Belim, Z.K., Sheth, M. & Sharma, S. 2019. Reliability and validity of Gujarati version of physical activity questionnaire for children. *Int J Phys Educ Sports Health*, 6:154-157.

Bell, E., Harley, B. & Bryman, A. 2022. Business research methods. Oxford University Press.

Belouafa, S., Habti, F., Benhar, S., Belafkih, B., Tayane, S., Hamdouch, S., Bennamara, A. & Abourriche, A., 2017. Statistical tools and approaches to validate analytical methods: methodology and practical examples. *International Journal of Metrology and Quality Engineering*, 8:9.

Bennett, L. 2002. Using empowerment and social inclusion for pro-poor growth: a theory of social change. Working draft of background paper for the social development strategy paper. Washington, DC: World Bank.

Bergheim, K., Nielsen, M.B., Mearns, K. & Eid, J. 2015. The relationship between psychological capital, job satisfaction, and safety perceptions in the maritime industry. *Safety Science*, 74:27-36.

Bernards, N. 2017. The International Labour Organization and African trade unions: tripartite fantasies and enduring struggles. *Review of African Political Economy*, 44(153):399-414.

Bhole, S.A. 2016. Safety problems and injuries on construction site: a review. *International Journal of Engineering and Techniques*, 2(4):24-35.

Birmingham, P. & Wilkinson, D., 2003. Using research instruments: A guide for researchers. London: Routledge.

Bonini, S. & Görner, S. 2011. The business of sustainability: Putting it into practice. *McKinsey Global Survey Results*.

Botti, L., Ferrari, E. & Mora, C. 2017. Automated entry technologies for confined space work activities: A survey. *Journal of Occupational and Environmental Hygiene*, 14(4):271-284.

Bridger, R. 2017. Introduction to human factors and ergonomics. CRC Press.

Busch, C., 2021. *Preventing Industrial Accidents: Reappraising HW Heinrich: More than Triangles and Dominoes*. Routledge.

Check, J. & Schutt, R.K. 2017. Science, schooling and educational research. *Research Methods in Education*, 2-20.

Cherniak, O., Trishch, R., Kim, N. & Ratajczak, S. 2020. Quantitative assessment of working conditions in the workplace. *Engineering Management in Production and Services*, 12(2):99-106.

Chibwe, L., Parrott, J.L., Shires, K., Khan, H., Clarence, S., Lavalle, C., Sullivan, C., O'Brien, A.M., De Silva, A.O., Muir, D.C. & Rochman, C.M. 2022. A deep dive into the complex chemical mixture and toxicity of tire wear particle leachate in fathead minnow. *Environmental Toxicology and Chemistry*, 41(5):1144-1153.

Chigwata, T.C., Muchapondwa, V.V. & de Visser, J. 2017. Ministerial directives to local government in Zimbabwe: top-down governance in a decentralized constitution. *Journal of African Law*, 61(1):41-56.

Choe, S., Seo, W. & Kang, Y. 2020. Inter-and intra-organizational safety management practice differences in the construction industry. *Safety Science*, 128:104778.

Clark-Kazak, C. 2017. Ethical considerations: Research with people in situations of forced migration. Refuge: *Canada's Journal on Refugees/Refuge: revue canadienne sur les réfugiés*, 33(2):11-17.

Cloete, H.C.A. 2016. Human resource development in local government: A management perspective (Doctoral thesis, Stellenbosch: Stellenbosch University).

Cloutier, O., Felusiak, L., Hill, C. & Pemberton-Jones, E.J. 2015. The importance of developing strategies for employee retention. *Journal of Leadership, Accountability & Ethics*, 12(2).

Coffelt, T.A., Grauman, D. & Smith, F.L. 2019. Employers' perspectives on workplace communication skills: The meaning of communication skills. *Business and Professional Communication Quarterly*, 82(4):418-439.

Conchie, S.M. & Donald, I.J., 2009. The moderating role of safety-specific trust on the relation between safety-specific leadership and safety citizenship behaviors. *Journal of Occupational Health Psychology*, 14(2):137.

Connor, T.H., Celano, P., Frame, J.N. and Zon, R.T., 2017. Summary of the workshop on the safe handling of hazardous drugs cohosted by the national institute for occupational safety and health and the American society of clinical oncology. Journal of Oncology Practice, 13(3), pp.199-205.

Conor, M.J., Marshall, D.C., Moiseenko, V., Moore, K., Cervino, L., Atwood, T., Sanghvi, P., Mundt, A.J., Pawlicki, T., Recht, A. & Hattangadi-Gluth, J.A. 2017. Adverse events involving radiation oncology medical devices: Comprehensive analysis of US Food and Drug Administration data, 1991 to 2015. *International Journal of Radiation Oncology* Biology* Physics*, 97(1):18-26.

Craciun, N. 2017. The personal protective equipment against falls from height at the limit between risk and security. *Calitatea*, 18(S1):140.

Curcuruto, M., Mearns, K.J. & Mariani, M.G. 2016. Proactive role-orientation toward workplace safety: Psychological dimensions, nomological network and external validity. *Safety Science*, 87:144-155.

Davy, J., Gomes, J.O., Volosiuk, A., Jana, A., Ray, G., Ganguli, A.K., Zhang, W. & Todd, A. 2018, August. The BRICS plus Network: a historical overview and future perspectives of the network's role in human factors and ergonomics. In Congress of the International

Ergonomics Association (pp. 647-656). Springer, Cham.

Dekker, S.W. & Breakey, H. 2016. ‘Just culture’: Improving safety by achieving substantive, procedural and restorative justice. *Safety Science*, 85:187-193.

Dekker, S. 2016. *Just culture: Balancing safety and accountability*. CRC Press.

Denis, D.J. 2018. SPSS data analysis for univariate, bivariate, and multivariate statistics. John Wiley & Sons.

De Stefano, V. & Aloisi, A. 2019. Fundamental labour rights, platform work and human rights protection of non-standard workers. In Research handbook on labour, business and human rights law. Edward Elgar Publishing.

Dr JS Moroka Local Municipality. 2021. 2021/2022 Approved Integrated Development Plan – IDP and 2021/2022 Approved budget, as reviewed, June 2021. Dr JS Moroka Local Municipality reviewed and approved 2021/2022 Work Skills Plan. 2021; Dr JS Moroka Local Municipality reviewed and approved 2021/2022 SCM Policy. 2021; Dr JS Moroka Local Municipality reviewed and approved 2021/2022 OHS Policy. 2021.

Eberle, T.S. 2015. Exploring another’s subjective life-world: A phenomenological approach. *Journal of Contemporary Ethnography*, 44(5):563-579.

Efstathiou, G. 2019. Translation, adaptation and validation process of research instruments. In Individualized care (pp. 65-78). Springer, Cham.

Falakh, F. & Setiani, O. 2018. Hazard identification and risk assessment in water treatment plant considering environmental health and safety practice. In E3S Web of Conferences (31:06011). EDP Sciences.

Farnell, E., Kvinge, H., Dixon, J.P., Dupuis, J.R., Kirby, M., Peterson, C., Schundler, E.C. & Smith, C.W. 2020, April. A data-driven approach to sampling matrix selection for compressive sensing. *Computational Imaging V*, 11396:1139603).

Fasterling, B. 2017. Human rights due diligence as risk management: social risk versus human rights risk. *Business and Human Rights Journal*, 2(2):225-247.

Ferreira, E.J. & Strydom, E.A. 2015. Ergonomics and technologies: regulatory compliance in the virtual office in South Africa. *Ergonomics SA: Journal of the Ergonomics Society of South Africa*, 27(2):4-17.

Fenstad, J., Dahl, Ø. & Kongsvik, T. 2016. Shipboard safety: exploring organizational and regulatory factors. *Maritime Policy & Management*, 43(5):552-568.

Fernandez Orozco, R.S. 2022. Training and workforce re-orientation. In Handbook of Non-destructive Evaluation 4.0 (pp. 1187-1243). Springer, Cham.

Ferreira, E.J. & Strydom, E.A. 2015. Ergonomics and technologies: regulatory compliance in the virtual office in South Africa. *Ergonomics SA: Journal of the Ergonomics Society of South Africa*, 27(2):4-17.

Ferronato, N. & Torretta, V. 2019. Waste mismanagement in developing countries: A review of global issues. *International Journal of Environmental Research and Public Health*, 16(6):1060.

Fleming, J. & Zegwaard, K.E. 2018. Methodologies, methods and ethical considerations for conducting research in work-integrated learning. *International Journal of Work-Integrated Learning*, 19(3):205-213.

Fourie, W. 2018. Aligning South Africa's National Development Plan with the 2030 Agenda's Sustainable Development Goals: Guidelines from the policy coherence for development movement. *Sustainable Development*, 26(6):765-771.

Girard, S.A., Leroux, T., Courteau, M., Picard, M., Turcotte, F. & Richer, O. 2015. Occupational noise exposure and noise-induced hearing loss are associated with work-related injuries leading to admission to hospital. *Injury Prevention*, 21(e1):e88-e92.

Gundry, D. & Deterding, S. 2019. Validity threats in quantitative data collection with games: A narrative survey. *Simulation & Gaming*, 50(3):302-328.

Harrison, H., Birks, M., Franklin, R. & Mills, J. 2017, January. Case study research: Foundations and methodological orientations. In *Forum qualitative Sozialforschung/Forum: qualitative social research,* 18(1):1-17.

Hazardous Chemical Substances Regulations (GN 1179 of 1995).

Heracleous, C. & Michael, A. 2019. Experimental assessment of the impact of natural ventilation on indoor air quality and thermal comfort conditions of educational buildings in the Eastern Mediterranean region during the heating period. *Journal of Building Engineering*, 26:100917.

Hignett, S., Jones, E.L., Miller, D., Wolf, L., Modi, C., Shahzad, M.W., Buckle, P., Banerjee, J. & Catchpole, K. 2015. Human factors and ergonomics and quality improvement science: integrating approaches for safety in healthcare. *BMJ Quality & Safety*, 24(4):250-254.

Hollweck, T. 2015. Case Study Research Design and Methods . Thousand Oaks, CA: Sage. 282 pages. Canadian Journal of Program Evaluation, 30(1).

Hopkin, P. 2018. Fundamentals of risk management: understanding, evaluating and implementing effective risk management. Kogan Page Publishers.

Ibrahim, A.A., Sheikh, R. & Rachid, G. 2016, November. HSE governance concerns and challenges in a potential oil and gas producer. In *Abu Dhabi International Petroleum Exhibition & Conference*. OnePetro.

Ijeoma, E. & Nzewi, O. 2016. Work procedures application in municipal government: Perspectives from local government employees in South Africa. *Journal of Public Administration*, 51(1):.58-72.

International Labour Organization's (ILO) conventions. 1947 and 1995. Labour Inspection Convention, 1947 (No. 81) and Recommendations (Nos. 81 and 82) and by the Protocol of 1995.

International Labour Organization's (ILO) conventions. 1981. The Occupational Safety and Health Convention (155 of 1981).

International Labour Organization's (ILO) conventions. 1985. Occupational Health Services Convention, 1985 (No. 161).

International Labour Organization's (ILO). 1997 and 2016.

International Labour Organization's (ILO) conventions. 2002. Occupational safety and health instruments. Protocol and Convention 2002.

International Labour Organization's (ILO) conventions. 2006. Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187).

Jain, S. & Angural, V. 2017. Use of Cronbach's alpha in dental research. *Medico Research Chronicles*, 4(03):285-291.

Janno, J. & Koppel, O. 2017. Human factor as the main operational risk in dangerous goods transportation chain. AAM Int. Sci. Book, 25: 333-344.

Jespersen, A.H., Hohnen, P. & Hasle, P. 2016. Internal audits of psychosocial risks at workplaces with certified OHS management systems. *Safety Science*, 84:201-209.

Jonathan, G.K. & Mbogo, R.W. 2016. Maintaining health and safety at workplace: employee and employer's role in ensuring a safe working environment. *Journal of Education and Practice*, 7(29):1-7.

Kamau, K.J., Osuga, B.O. & Njuguna, S. 2017. Challenges facing implementation of referral system for quality health care services in Kiambu county, Kenya. *http://repository.daystar.ac.ke/xmlui/handle/123456789/3621*.

Karakhan, A.A. & Gambatese, J.A. 2017. Integrating worker health and safety into sustainable design and construction: designer and constructor perspectives. *Journal of Construction Engineering and Management*, 143(9):04017069.

Kartikawati, M. & Djunaidi, Z. 2018. Analysis of safety culture maturity level in construction at PT MK gelora bung karno main stadium renovation project. *KnE Life Sciences*, 348-360.

Khan, W.A., Mustaq, T. & Tabassum, A. 2014. Occupational health, safety and risk analysis. *International Journal of Science, Environment and Technology*, 3(4):1336-1346.

Khan, M.W., Ali, Y., De Felice, F. & Petrillo, A. 2019. Occupational health and safety in construction industry in Pakistan using modified-SIRA method. *Safety Science*, 118:109-118.

Kharzi, R., Chaib, R. & Akni, A. 2020. Prioritizing the actions to be undertaken in health and safety at work: case study region of Tiaret. *International Journal of Law and Management*, 62(3): 267-275

Krejcie, R.V. & Morgan, D.W. 1970. Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3):607-610.

Kortum, E. 2016. The WHO global approach to protecting and promoting health at work. Creating Healthy Workplaces: Stress Reduction, Improved Well-being, and Organizational Effectiveness, p.23.

Kretchy, J.P., Norman, I.D. & Opong-Addoh, M.A. 2019. Adherence to safety protocols among factory workers of an industrial municipality in southern Ghana. *Public Health Policy Plann. 2019; 3 (1): 13-7. 14 J Public Health Policy Plann 2019 Volume 3 Issue, 1.*

Kornelius, H. 2018. Linking occupational health and safety management to sustainable competitive advantage of the firm. *Journal of Economics and Business*, 1(4):577-583.

Lancaster, K. 2017. Confidentiality, anonymity and power relations in elite interviewing: conducting qualitative policy research in a politicised domain. *International Journal of Social Research Methodology*, 20(1):93-103.

Laursen, T.L., Hagemann, C.A., Wei, C., Kazankov, K., Thomsen, K.L., Knop, F.K., Grønbæk, H., Chow, F.C.L., Chok, K.S.H., Lima, L.C.D. & Miranda, A.S. 2019. *WJH. World*, 11(2):138-249.

Leavy, P. 2017. Research design: Quantitative, qualitative, mixed methods, arts-based, and community-based participatory research approaches. Guilford Publications.

Leck, H. & Sirota, J. 2019. The importance of risk management for managers. *EcoSoEn*, (1-2):103-108.

Lee, J., Lee, W., Choi, W.J., Kang, S.K. & Ham, S. 2019. Association between exposure to extreme temperature and injury at the workplace. *International Journal of Environmental Research and Public Health*, 16(24):49-55.

Leedy, P.D. and Ormrod, J.E., 2019. Practical research: Planning and design. Pearson. One Lake Street, Upper Saddle River, New Jersey 07458.

Lippel, K. 2016. Addressing Occupational Violence. The Document and Publications

Production, Printing and Distribution Branch (PRODOC) of the ILO. *www.ilo.org/publns*.

Loosemore, M. & Malouf, N. 2019. Safety training and positive safety attitude formation in the Australian construction industry. *Safety Science*, 113:233-243.

Lund, F., Alfers, L. & Santana, V. 2016. Towards an inclusive occupational health and safety for informal workers. *New Solutions: A Journal of Environmental and Occupational Health Policy*, 26(2):190-207.

Luthans, F. & Youssef-Morgan, C.M. 2017. Psychological capital: An evidence-based positive approach. *Annual Review of Organizational Psychology and Organizational Behavior*, 4:339-366.

Ma, J. & Hipel, K.W. 2016. Exploring social dimensions of municipal solid *waste management around the globe: a systematic literature review. Waste* Management, 56:3-12.

Małysa, T. 2019. Work safety during usage, repair and maintenance of machines: a review of work safety in the aspect of accidents at work. *New Trends in Production Engineering*, 2(2):151-161.

Mat, R.C., Alias, W.N.I.W., Tan, I.H., Abdullah, Z.M. & Zin, S.M. 2021. Conceptual Framework of Health and Safety Management Practices Affecting Safety Performance of Malaysian Bumiputera SMEs. International Journal of Academic Research in Business and Social Sciences, 11(4):1210–1221.

Mashamaite, K. & Lethoko, M. 2018. Role of the South African local government in local economic development. *International Journal of eBusiness and eGovernment Studies*, 10(1):114-128.

Masuku, M.M. & Jili, N.N. 2019. Public service delivery in South Africa: The political influence at local government level. *Journal of Public Affairs*, 19(4):19-35.

Maxwell, J.A. 2017. The validity and reliability of research: A realist perspective. *The BERA/SAGE Handbook of Educational Research*, 1:116-140.

Mazhar, M.A., Khan, N.A., Ahmed, S., Khan, A.H., Hussain, A., Changani, F., Yousefi, M., Ahmadi, S. & Vambol, V. 2020. Chlorination disinfection by-products in municipal drinking water: a review. *Journal of Cleaner Production*, 273:123159.

McManus, N. 2018. Safety and health in confined spaces. London: Routledge.

Mehrdad, R. 2020. Introduction to occupational health hazards. *The International Journal of Occupational and Environmental Medicine*, 11(1):59.

Meister, D. 2018. The history of human factors and ergonomics. CRC Press.

Mekhlef, A.K., Hameed, I.H. & Khudhair, M.E. 2017. Prevalence of physical injuries on the head, neck and entire body in, Hilla, Iraq. *Research Journal of Pharmacy and Technology*, 10(10):3276-3282.

Mhlanga, T.S., Mjoli, T.Q. & Marange, C.S. 2021. Personality and psychological conditions in relation to job engagement amongst municipal workers in the Eastern Cape province, South Africa. *SA Journal of Industrial Psychology*, 47(1):1-13.

Mishra, P., Singh, U., Pandey, C.M., Mishra, P. & Pandey, G. 2019. Application of student's t-test, analysis of variance, and covariance. *Annals of Cardiac Anaesthesia*, 22(4):407.

Mkungunugwa, T., Owili, P.O., Muula, A.S. & Kuo, H.W. 2022. Implementation determinants of Zimbabwe National Occupational safety and health policy in Willowvale Industrial Area, Zimbabwe. *International Journal of Environmental Research and Public Health*, 19(3):14-24.

Montibeller, G. & Von Winterfeldt, D. 2015. Cognitive and motivational biases in decision and risk analysis. *Risk Analysis*, 35(7):1230-1251.

Moyo, T. 2017. Data collection instruments in research: An ontological and epistemological reflection. *Journal of Public Administration*, 52(Special Issue 1):285-295.

Mullins, R., Blair, E. & Dunlap, E.S. 2019. Management leadership: Improving employee safety engagement. *Professional Safety*, 64(11):36-42.

Naidoo, D., Govender, P., Naidoo, S.N., Ngubane, N., Nkosi, Z. & Mulla, A. 2020. Occupational risks in occupational therapy service learning: a single-site “fear factor” study in South Africa. *Occupational Therapy International*, 2020.

Ndevu, Z.J. & Muller, K. 2018. Operationalising performance management in local government: The use of the balanced scorecard. *SA Journal of Human Resource Management*, 16(1):1-11.

Nghitanwa, E.M. & Zungu, L. 2017. Occupational health and safety status in the Windhoek construction industry: a Namibian perspective. *Open Journal of Safety Science and Technology*, 7(03):113.

Ning, X., Qi, J. & Wu, C. 2018. A quantitative safety risk assessment model for construction site layout planning. *Safety Science*, 104:246-259.

Njomo, L.M. 2019. A framework to enhance employee-manager relationship in South African municipalities: the case of the Nelson Mandela Bay municipality in Port Elizabeth, South Africa. *Management Today*, 9(2):114-128.

Nyantakyi, E.K., Obiri-Yeboah, A., Obeng-Ahenkora, N.K., Domfeh, M.K. & Mohammed, G.A. 2020. Investigating occupational health and safety of workers on selected construction sites in the Sunyani Municipality, Ghana. *Journal of Safety Engineering*, 9(1):1-8.

Nzimakwe, T. 2022. Exploring public leadership: Implications for local government. Lessons from Political Leadership in Africa: Towards Inspirational and Transformational Leaders, p.78.

Opie, C. 2019. Understanding quantitative data analysis. *Getting Started in Your Educational Research: Design, Data Production and Analysis*, p.275.

Osei-Asibey, D., Ayarkwa, J., Acheampong, A., Adinyira, E. & Amoah, P., 2021. Impacts of accidents and hazards on the Ghanaian construction industry. *International Journal of Construction Management,* 1-20.

Padidar, S., Liao, S.M., Magagula, S., Mahlaba, T.A.A., Nhlabatsi, N.M. & Lukas, S. 2021. Assessment of early COVID-19 compliance to and challenges with public health and social prevention measures in the Kingdom of Eswatini, using an online survey. *Plos One*, 16(6):e0253954.

Paganelli, M., Madeo, E., Nabeel, I., Pilia, I., Lecca, L.I., Pili, S. & Fostinelli, J. 2018. Education and training in global occupational health and safety: a perspective on new pathways to sustainable development. *Annals of Global Health*, 84(3).

Park, R.J. 2022. Hot temperature and high-stakes performance. *Journal of Human Resources*, 57(2):400-434.

Park, J., Kim, K. & Cho, Y.K. 2017. Framework of automated construction-safety monitoring using cloud-enabled BIM and BLE mobile tracking sensors. *Journal of Construction Engineering and Management*, 143(2):05016019.

Pescud, M., Teal, R., Shilton, T., Slevin, T., Ledger, M., Waterworth, P. & Rosenberg, M. 2015. Employers' views on the promotion of workplace health and wellbeing: a qualitative study. *BMC Public Health*, 15(1):1-10.

Petitta, L., Probst, T.M. & Barbaranelli, C. 2017. Safety culture, moral disengagement, and accident underreporting. *Journal of Business Ethics*, 141(3):489-504.

Pham, N.T., Lelikov, G. & Korolchenko, D. 2018, June. Improvement of the safety systems for working at heights on transmission towers. In IOP Conference Series: Materials Science and Engineering (Vol. 365, No. 4, p. 042054). IOP Publishing.

Phusavat, K., Vongvitayapirom, B., Kess, P. & Lin, B. 2017. Safety management system in automotive and energy industries. *International Journal of Quality & Reliability Management,* 34(4):569-580.

Pigini, L., Bovi, G., Panzarino, C., Gower, V., Ferratini, M., Andreoni, G., Sassi, R., Rivolta, M.W. & Ferrarin, M. 2017. Pilot test of a new personal health system integrating environmental and wearable sensors for telemonitoring and care of elderly people at home (SMARTA project). *Gerontology*, 63(3):281-286.

Pitts, P. & Brereton, P. 2016. The development and use of tools to support workplace hand-arm vibration exposure evaluation. *Acoustics Australia*, 44(1):113-120.

Policy, O.H.S., Assessment, R. & Controls, D. 2021. Occupational Health & Safety Guidelines. Policy.

Ponto, J. 2015. Understanding and evaluating survey research. *Journal of the Advanced Practitioner in Oncology*, 6(2):168.

Popov, G., Lyon, B.K. & Hollcroft, B.D. 2016. Risk assessment: A practical guide to assessing operational risks. John Wiley & Sons.

Protocol and the Promotional Framework for Occupational Safety and Health Convention (187 of 2006)

Quinlan, C., Babin, E., Carr, J., Griffin, M. & Zikmund, W.G. 2019. Business Research Methods, 2nd ed. Cengage Learning EMEA

Rabenu, E., Yaniv, E. & Elizur, D. 2017. The relationship between psychological capital, coping with stress, well-being, and performance. *Current Psychology*, 36(4):875-887.

Rahi, S., Alnaser, F.M. & Abd Ghani, M. 2019. Designing survey research: recommendation for questionnaire development, calculating sample size and selecting research paradigms. *Economic and Social Development: Book of Proceedings*, 1157-1169.

Rai, P.K., Lee, S.S., Zhang, M., Tsang, Y.F. & Kim, K.H. 2019. Heavy metals in food crops: Health risks, fate, mechanisms, and management. *Environment International*, 125:365-385.

Rantanen, J., Lehtinen, S., Valenti, A. & Iavicoli, S. 2017. A global survey on occupational health services in selected international commission on occupational health (ICOH) member countries. *BMC Public Health*, 17(1):1-15.

Reddy, S.C., Valderrama, A.L. & Kuhar, D.T. 2019. Improving the use of personal protective equipment: applying lessons learned. *Clinical Infectious Diseases,* 69(Supplement_3):S165-S170.

Reese, C.D. 2018. *Occupational health and safety management: a practical approach*. CRC Press.

Regmi, P.R., Waithaka, E., Paudyal, A., Simkhada, P. & van Teijlingen, E. 2016. Guide to the design and application of online questionnaire surveys. *Nepal Journal Of Epidemiology*, 6(4):640.

Renschler, L.A., Terrigino, E.A., Azim, S., Snider, E., Rhodes, D.L. & Cox, C.C. 2016. Employee perceptions of their organization's level of emergency preparedness following a brief workplace emergency planning educational presentation. *Safety and Health at Work*, 7(2):166-170.

Republic of South Africa. 1974. Health Professions Act (Act No. 56 of 1974).

Republic of South Africa. 1977. National Building Regulations and Building Standards Act (Act No. 103 of 1987).

Republic of South Africa. 1983. Basic Conditions of Employment Act (Act No 3 of 1983).

Republic of South Africa. 1987. Environmental Regulations for Workplaces, (Government Notice No. R. 2281). 1987. Tobacco (Tobacco Products Control Amendment Act, 2007) 2007. Asbestos (Asbestos Regulations. 2001. (Government Notice No. R.155). Risks related to nanotechnology, Contraction of HIV in the workplace (Code of Good Practice: Key aspects of HIV/AIDS and employment (No. R. 1298) (OHSA, 1993) 1993.

Republic of South Africa. 1987. Fire Brigade Services Act (Act No. 99 of 1987).

Republic of South Africa. 1993. Occupational Health and Safety Act (Act No. 85 of 1993).

Republic of South Africa. 1995. Labour Relations Act (Act No. 66 of 1995).

Republic of South Africa. 1997. Water Services Act (Act No. 108 of 1997

Republic of South Africa. 1998. National Environmental Management Act (Act No. 107 of 1998).

Republic of South Africa. 1996. Constitution of the Republic of South Africa (Act No. 108 of 1996).

Republic of South Africa. 1997. Basic Conditions of Employment Act (BCEA) (Act No 75 of 1997).

Republic of South Africa. 2002. Disaster Management Act (Act No. 57 of 2002) and its regulations.

Republic of South Africa. 2004. Water Services Amendment Act (Act No. 30 of 2004)

Republic of South Africa. 2005. National Disaster Management Framework.

Republic of South Africa. 2008. National Safety Council. 2008.

Republic of South Africa. 2008. Standards Act (Act No. 8 of 2008).

Republic of South Africa. 2013. Protection Of Personal Information Act (Act No. 4 of 2013)

Republic of South Africa. 2014. National Institute of Occupational Health. 2014.

Republic of South Africa. 2015, 2018, 2021 & 2022. The South African Local Bargaining Council. Collective Agreements - 2015, 2018, 2021 & 2022.

Republic of South Africa. National Development Plan. Vision-2030. 2013.

Republic of South Africa. South African Local Bargaining Council (SALGBC). 2018. Collective Agreement on Conditions of Services for the Mpumalanga Division, as extended.

Republic of South Africa. 2020. Compensation for Occupational Injuries and Diseases Act (COIDA), No. 130 of 1993 (COIDA) and ILO Convention 1964 (No.121).

Republic of South Africa. 2020. Disaster Management Act, 57 of 2002. COVID-19 Regulations and Notices (2020), as published under GN 313 in GG No. 43096 dated 15 March 2020.

Republic of South Africa. 2020. Measuring the progress of development in SA. StatisticsSA, 2019/2020.

Restuputri, D.P. and Fakhri, M., 2016. The Analysis Of Health And Safety Aspects By Using Hazard Identification And Risk Assessment (HIRA) Method. Research Report.

Ricci, F., Chiesi, A., Bisio, C., Panari, C. & Pelosi, A. 2016. Effectiveness of occupational health and safety training: A systematic review with meta-analysis. *Journal of Workplace Learning, 8(6):355-377.*

Ringwood, F. 2017. Celebrating world toilet day. *Water&Sanitation Africa*, 12(6):42-44.

Salkind, N.J. 2018. Exploring research 9th ed., Pearson Education Limited, Essex, England, Inc.

Salman, S., Mahmood, A. & Aftab, F., 2016. Impact of safety health environment on employee retention in pharmaceutical industry: Mediating role of job satisfaction and motivation. IBT *Journal of Business Studies (JBS)*, 1(1).

Sasa, M.S. 2020. The ontological foundation of positivist epistemology. *Nasara Journal of Philosophy*, 43-53.

Saunders, M., Lewis, P. & Thornhill A. 2016. Research methods for business studies, 7th ed. Edinburgh Gate: Pearson Education Limited.

Saunders, M.N. & Bezzina, F. 2015. Reflections on conceptions of research methodology among management academics. *European Management Journal*, 33(5):297-304.

Schall Jr, M.C., Sesek, R.F. & Cavuoto, L.A. 2018. Barriers to the adoption of wearable sensors in the workplace: A survey of occupational safety and health professionals. *Human Factors*, 60(3):351-362.

Schmitt, F. 2017. Social epistemology. The Blackwell guide to epistemology, pp.354-382.

Schober, P., Boer, C. & Schwarte, L.A. 2018. Correlation coefficients: appropriate use and interpretation. *Anesthesia & Analgesia*, 126(5):1763-1768.

Senso, P. 2017. *Factors affecting implementation of health and safety practices in workplace: a case study of Temeke Municipality* (Doctoral thesis, The Open University of Tanzania).

Sepadi, M.M. and Nkosi, V., 2021. A Study Protocol to Assess the Respiratory Health Risks and Impacts amongst Informal Street Food Vendors in the Inner City of Johannesburg, South Africa. International journal of environmental research and public health, 18(21), p.11320.

Sfantou, D.F., Laliotis, A., Patelarou, A.E., Sifaki-Pistolla, D., Matalliotakis, M. & Patelarou, E. 2017, December. Importance of leadership style towards quality of care measures in healthcare settings: a systematic review. *Healthcare,* 5(4):73.

Shah, S. & Balaganapathy, M. 2017. Reliability and validity study of the Gujarati version of the Oswestry Disability Index 2.1 a. *Journal of Back and Musculoskeletal Rehabilitation*, 30(5):1103-1109.

Shirali, G.A., Salehi, V., Savari, R. & Ahmadiangali, K. 2018. Investigating the effectiveness of safety costs on productivity and quality enhancement by means of a quantitative approach. *Safety Science*, 103:316-322.

Shuaib, N.A., Yusoff, N.N., Assyahid, W.A.R., Ventakasubbarow, P.T., Walker, M.R., Ravindaran, Y., Arumugam, T. & Nagasvaran, V. 2021, May. Assessing workplace hazard and safety: Case study on falling from height at building construction site. In AIP Conference Proceedings (Vol. 2339, No. 1, p. 020219). AIP Publishing LLC.

Sibonde, A.H. & Dassah, M.O. 2021. The relationship between employee motivation and service quality: Case study of a selected municipality in the Western Cape province, South Africa. *Africa's Public Service Delivery & Performance Review*, 9(1):12.

Sibongiseni, S., Myeni, S., Ntombenhle, J. & Ngcobo. 2020. International Labour Organisation and the Department of Employment and Labour, South Africa, Pretoria. The Profile of Occupational Health and Safety South Africa. SeniNhle Occupational Health Services. Department of Employment and Labour. South Africa and the International Labour Organization.

Sielicka, E., Choma, A. & Kowalczyk, D. 2020. Types of fire extinguishers. In сборники конференций ниц социосфера (No. 30, pp. 25-27). Vedecko vydavatelske centrum Sociosfera-CZ sro.

Smallwood, J. 2015. Optimising the elements of a construction health and safety (H&S) programme and audit system. *Procedia Engineering*, 123:528-537.

Sohail, M. & Rehman, C.A. 2015. Stress and health at the workplace-a review of the literature. *Journal of Business Studies Quarterly*, 6(3):94.

Song, Y., Son, Y.J. & Oh, D. 2015. Methodological issues in questionnaire design. *Journal of Korean Academy of Nursing*, 45(3):323-328.

Sprent, P. 2019. Data driven statistical methods. Routledge.

Stanton, N.A., Salmon, P.M. & Walker, G.H. 2017. Editorial New paradigms in ergonomics. *Ergonomics*, 60(2):151-156.

Stave, G.M. and Wald, P.H. eds. 2016. Physical and biological hazards of the workplace. John Wiley & Sons.

Stewart, P., Bezuidenhout, A. & Bischoff, C. 2020. Safety and health before and after Marikana: subcontracting, illegal mining and trade union rivalry in the South African mining industry. *Review of African Political Economy,* 47(163):27-44.

Suhardono, E. 2022. Implementation of policy for handling of hazardous goods in the effort to achieve the safety and security of ro-ro ships in tanjung silver utama kesyahbandaran. *International Journal of Applied Research in Social Sciences*, 4(2):51-62.

Suryani, D. & Suhartini, E. 2018. Regulation of non-smoking areas in local government regulation. *Jurnal hukum de rechtsstaat*, 4(2):105-114.

Taherdoost, H., 2016. Sampling methods in research methodology; how to choose a sampling technique for research. How to choose a sampling technique for research (April 10, 2016).

Tavakoli, M., Carriere, J. & Torabi, A. 2020. Robotics, smart wearable technologies, and autonomous intelligent systems for healthcare during the COVID-19 pandemic: An analysis of the state of the art and future vision. *Advanced Intelligent Systems*, 2(7):2000071.

Tharaldsen, J.E., Olsen, E. & Rundmo, T. 2008. A longitudinal study of safety climate on the Norwegian continental shelf. *Safety Science*, 46(3):427-439.

Thatcher, A., Waterson, P., Todd, A. & Moray, N. 2018. State of science: ergonomics and global issues. *Ergonomics*, 61(2):197-213.

Thatcher, A. & Yeow, P.H. 2018. Sustainability and resilience: using the sustainable system-of-systems model for ergonomics interventions. *Ergonomics SA: Journal of the Ergonomics Society of South Africa*, 30(1):1-16.

Thomson, D.R., Rhoda, D.A., Tatem, A.J. & Castro, M.C. 2020. Gridded population survey sampling: a systematic scoping review of the field and strategic research agenda. *International Journal of Health Geographics*, 19(1):1-16.

Tshoose, C.I. 2015. Dynamics of public participation in local government: A South African perspective. African Journal of Public Affairs Volume 8, Number 2 (2015). *http://hdl.handle.net/2263/58158*.

Tymvios, N. & Gambatese, J.A. 2016. Direction for generating interest for design for construction worker safety: a Delphi study. *Journal of Construction Engineering and Management*, 142(8):04016024.

Upadhyay, S., Weech-Maldonado, R., Lemak, C.H., Stephenson, A., Mehta, T. & Smith, D.G. 2020. Resource-based view on safety culture's influence on hospital performance: The moderating role of electronic health record implementation. *Health Care Management Review*, 45(3):207-216.

Vecchio-Sadus, A.M. & Griffiths, S. 2004. Marketing strategies for enhancing safety culture. *Safety Science*, 42(7):601-619.

Vural, F. & Sutsunbuloglu, E. 2016. Ergonomics: an important factor in the operating room. *Journal of Perioperative Practice*, 26(7-8):174-178.

Wang, H., Zhang, Y., Waytowich, N.R., Krusienski, D.J., Zhou, G., Jin, J., Wang, X. & Cichocki, A. 2016. Discriminative feature extraction via multivariate linear regression for SSVEP-based BCI. IEEE *Transactions on Neural Systems and Rehabilitation Engineering*, 24(5):532-541.

Wereda, W., Moch, N. & Wachulak, A. 2021. The importance of stakeholders in managing a safe city. *Sustainability*, 14(1):244.

West, B.T. & Blom, A.G. 2017. Explaining interviewer effects: A research synthesis. *Journal of Survey Statistics and Methodology*, 5(2):175-211.

Williams, C. 2007. Research methods. *Journal of Business & Economics Research (JBER)*, 5(3).

Wolkoff, P., 2018. Indoor air humidity, air quality, and health–An overview. International journal of hygiene and environmental health, 221(3), pp.376-390.

World Health Organization. 2015. Global status report on road safety 2015. World Health Organization.

World Health Organization. 2016. Global strategy on human resources for health: workforce 2030.

World Health Organization, 2018. Noncommunicable diseases country profiles 2018.

World Health Organization. 2019. *Global action plan on physical activity 2018-2030: more active people for a healthier world*. World Health Organization.

Yazdani, A., Neumann, W.P., Imbeau, D., Bigelow, P., Pagell, M., Theberge, N., Hilbrecht, M. & Wells, R. 2015. How compatible are participatory ergonomics programs with occupational health and safety management systems?. *Scandinavian Journal of Work, Environment & Health*, 111-123.

Yin, R.K. 2014. Case study research: design and methods. Thousand Oaks: Sage Publications.

Zondo, R.W. 2021. Assessing the effectiveness of an occupational health and safety system in a selected automotive assembly organisation in South Africa. *South African Journal of Economic and Management Sciences*, 24(1):35-53.

Zwane, Z. & Matsiliza, N.S. 2022. Stakeholders' involvement in service delivery at eDumbe Municipality. *Journal of Local Government Research and Innovation*, 3:45.

Appendix A: Questionnaire and Consent form

Dear prospective respondent,

You have been invited to participate in a research study titled **"ASSESSING THE LEVEL OF COMPLIANCE WITH SAFETY REGULATIONS IN THE DR JS MOROKA LOCAL MUNICIPALITY, SOUTH AFRICA"** which will be conducted by an MBA student with student no. 26863197 of the North-West University Business School.

The aim of this study is to assess the compliance level for safety regulations at Dr JS Moroka Local Municipality, and how best the municipality could adhere to and comply with safety regulations/legislations. This survey will take a maximum of 20 minutes to finalise, and your participation is voluntary. You are allowed to withdraw your participation at any time during the survey if you are not comfortable with some of the questions or your just do not want to continue. No reward will be offered for your time and participation in this study.

Should you decide to participate in the survey, kindly read the instructions below?

Instructions:

Please answer all the questions as honestly as possible. The information collected for this study will be collated and analysed to realise the project on the assessment of compliance level of safety regulations in Dr JS Moroka Local Municipality. Your responses will assist the student to make findings and propose recommendations to improve compliance with safety issues at the municipality. You do not need to identify yourself and, similarly, the student will uphold anonymity in that there will be no possibility of any respondent being identified or linked in any way to the research findings in the final research report. Where required, please indicate your answer with a cross (X) in the appropriate box or write a response in the space provided, using a black ballpoint pen.

Supervisor: Dr Talkmore Saurombe, Cell: 072 700 2950 and Email: *talkmoresaurombe@gmail.com*

Student: Mr Takane Thobejane, Cell number: 072 263 2537 and Email: *ctthobejane@gmail.com*.

Please answer all questions by marking the appropriately selected blank block with an "X". There are no right and wrong answers. Please, may you indicate if you consent to your participation or not?

I give my consent to participate in this study:

Yes	
No	

Demographic data is collected only for the profiling of respondents and nothing else. Since this study falls within the realm of social science, demographic analysis forms the basis for further analysis in this study

SECTION A: SOCIO-DEMOGRAPHIC CHARACTERISTICS

Q1. State your gender.

Male	
Female	
Others	

Q2. What is your age group?

Below 30 years	
30-39 years	
40-49 years	
50-59 years	
60 years and above	

Q3. What is your highest level of education?

None		
Grade 1-11		
Matric (grade 12)	NQF Level 4	
Certificate	NQF Level 5	
Diploma	NQF Level 6	
Bachelor's degree	NQF Level 7	
Honours degree/Post-graduate diploma	NQF Level 8	

Master's degree	NQF Level 9	
Doctorate (PhD)	NQF Level 10	

Q4. How long have you been working in Dept/Unit:……..……?

At most a year	
2-3 years	
4-5 years	
6-10 years	
More than 10 years	

Q5. Which function do you work in?

Support function	
Core function	

Q6. What is your post level?

OCCUPATIONAL LEVELS	**Task © (levels)**	**DESCRIPTION**	**X**
Top management/ executives	**23 - 26**	Controls the functional integration of the business. Determines the overall strategy and objectives of the business. Directs the company into the future. The nature of the work and focus is long-term. Sign-off on policy or strategy	
Senior management	**18-22**	Knowledge of entire business area/BU/company or group. Provides inputs for/formulation of the overall Organisational strategy. Translates the overall strategy into business plans for BU/Functional Unit, thereby operationalising organisational strategy. Implements and manages business plans, goals and objectives and ensures the achievement of overall key organisational/BU/functional outputs. Manages the development of innovation and change	

Professionally qualified & experienced specialists/mid-management	**14-18**	Professional knowledge of sub-discipline or discipline. Provides input in the formulation of organisational/functional Unit business plans. Formulate and implement departmental/team plans that will support the BU business plans. Optimisation of resources (finances, people, material, information and technology) to achieve given objectives in the most productive and cost-effective way.	
Skilled Technical & Academically Qualified/ Junior Management/ Supervisors/ Foremen/ Superintendents	**9-13**	Applies broad knowledge of products, techniques and processes. Evaluates procedures and applies previous experience. A good solution can usually be found. Determines own priorities. What has to be done is stipulated; but may require initiative in terms of how it should be done	
Semi-Skilled & discretionary decision-making	**4-8**	Accountable for direct product, process or service quality. Incremental improvement of existing processes and procedures according to clear guidelines. Choosing of correct action on the basis of set standards, training procedures and past experience	
Unskilled & defined decision-making	**1-3**	Steps to accomplish work or processes are clearly defined and understood. Tasks are sometimes repetitive and uncomplicated and the work cycle is short	

Q7. How frequently are you in communication with your direct manager in relations to safety matters/regulations?

No contact at all	
Very few contact	
Monthly	
Weekly	
Daily	

Q8. How frequently are you in communication with personnel involved in occupational health and safety matters/regulations in the municipality?

No contact at all	
Very few contact	
Monthly	
Weekly	
Daily	

Q9. How frequently are you in communication with any personnel about safety matters in the municipality?

No contact at all	
Very few contact	
Monthly	
Weekly	
Daily	

Q10. Have you been trained on occupational safety regulations of the municipality?

Yes	
No	

Q11. How frequently do you receive communication on safety regulations in the municipality?

No contact at all	
Very few contact	
Monthly	
Weekly	
Daily	

SECTION B: KNOWLEDGE OF SAFETY ISSUES

Q12. Indicate whether the following statement on safety regulations are true or false.

Item	Statement	Strongly agree	Agree	Neutral/I do not know	Disagree	Strongly disagree
a)	Safety accidents are preventable in workplaces if regulations are implemented correctly.					
b)	Management ensures that all employees are properly trained in how to perform every task safely and efficiently.					
c)	Employees are aware that it is their responsibility to report bridging of safety regulations by the employer					
d)	Employees like to be involved in the safety decisions that affect them.					
e)	Municipal management is not necessarily responsible for safety in the workplace.					
f)	Safety awareness is not automatically attributed to the workforce but must be carefully developed if employers truly care.					
g)	Safety is a process employed to prevent accidents					
h)	Safety is the art of controlling exposure and/or hazards that could cause personal injury, death, property damage and etc.					

SECTION C: COMPLIANCE WITH SAFETY REGULATIONS

Q13. For the following statements on COMPLIANCE WITH SAFETY ISSUES. Please indicate you level of agreement that the behaviour listed below have been displayed in the municipality

Item	Compliance with safety issues	I do not know	Strongly	Disagree	Neither agree	Agree	Strongly
a)	The municipality offers PPE/C to employees who qualify for it for free as per OHS Act	0	1	2	3	4	5
b)	There are safety signs in all municipal facilities	0	1	2	3	4	5
c)	There is an evacuation, floor plan, emergency exits and assembly points and emergency kits in the municipal buildings	0	1	2	3	4	5
d)	There are fire extinguishers in place and are installed, replaced, and maintained yearly as well as drillers and sprinklers	0	1	2	3	4	5
e)	Appointed health & safety committee members	0	1	2	3	4	5
f)	Conduct medical surveillance yearly	0	1	2	3	4	5
g)	Eat/smoke in designated areas	0	1	2	3	4	5

SECTION D: ROLE OF SAFETY STAKEHOLDERS IN RELATION TO COMPLIANCE WITH REGULATIONS

Q14. For the following statements on ROLE OF SAFETY STAKEHOLDERS IN RELATION TO COMPLIANCE WITH REGULATIONS. Please indicate you level of agreement that the behaviour listed below have been displayed in the municipality.

Item	Role of safety stakeholders to compliance of regulations	I do not	Strongly	Disagree	Neither	Agree	Strongly

a)	There is an active occupational health and safety (OHS) committee	0	1	2	3	4	5
b)	Management (municipal manager), council and occupational health safety personnel establish or improve procedures for employees to report safety hazards or suggest improvements without fear of reprisal	0	1	2	3	4	5
c)	The municipality management responds to concerns raised by workers and Department of Employment & Labour's (DEL) inspector/s	0	1	2	3	4	5
d)	OHS practitioner and management recommended training for employees, supervisors, and managers and refresher training on health and safety practices, procedures and emergency response	0	1	2	3	4	5
e)	Skills development facilitator (SDF) to plan and organise training programmes relating to safety	0	1	2	3	4	5
f)	Management and the committee establish procedures for reviewing reports of all safety incidents, including accidents, illnesses and deaths and it be approved by management and/or council	0	1	2	3	4	5
g)	OHS practitioner, together with the committee, develops systems to report accidents and 'near misses' in line with DEL guidelines and Acts	0	1	2	3	4	5

SECTION E: FACTORS INFLUENCING ACHIEVEMENT OF SAFETY TARGETS

Q15. For the following statements on FACTORS INFLUENCING ACHIEVEMENT OF SAFETY TARGETS. Please indicate you level of agreement that the behaviour listed below have been displayed in the municipality.

Item	Factor	I do not know	Strongly	Disagree	Neither agree	Agree	Strongly
a)	Lack of regular inspections and audits internally and from the DEL inspectors	0	1	2	3	4	5
b)	Poor management/supervision and lack of management buy-in in relation to safety matters	0	1	2	3	4	5
c)	Lack of protective clothing like gloves and etc.	0	1	2	3	4	5
d)	Lack of training in occupational safety, risk awareness and other related	0	1	2	3	4	5
e)	Municipality not reporting accidental incidents of employees at the workplace to DEL	0	1	2	3	4	5
f)	Enough budget allocated for safety related issues	0	1	2	3	4	5
g)	Dedicated, customised, and modified transportation for safety matters	0	1	2	3	4	5
h)	Non-adherence to safety regulations, such as OHS Act, ILO conventions, etc.	0	1	2	3	4	5
i)	Delay in procurement process for safety items (PPE/C)	0	1	2	3	4	5

SECTION F: PENALTIES TO NON-ADHERENCE WITH SAFETY REGULATIONS

Q16. For the following statements on PENALTIES TO NON-ADHERENCE TO SAFETY REGULATIONS. Please indicate you level of agreement that the behaviour listed below have been displayed in the municipality.

Item	**Penalty**	**I do not know**	**Strongly disagree**	**Disagree**	**Neither agree nor**	**Agree**	**Strongly agree**
a)	Municipality incurred financial penalties	0	1	2	3	4	5
b)	Management has charged certain employees for not complying with the health and safety regulations	0	1	2	3	4	5
c)	Management has lost current or potential staff due to the municipality being an unsafe and unconducive workplace	0	1	2	3	4	5
d)	There has been down time and loss of goods and services caused by the workplace being unhealthy and unsafe	0	1	2	3	4	5
e)	Manager/s, especially the municipal manager were charged with a criminal offense on the death of an employee at work because of non-compliance with safety related regulations	0	1	2	3	4	5
f)	Some employees have appeared in front of OHS committee as well as labour relations processes for disciplinary action due to non-compliance with safety regulations	0	1	2	3	4	5
h)	Employees sign a code of conduct as per Local Government: Municipal Systems Act, 32 of 2000, Schedule 2	0	1	2	3	4	5

SECTION G: STRATEGIES IMPLEMENTED IN ENSURING COMPLIANCE TO SAFETY REGULATIONS

Q17. For the following statements on STRATEGIES IMPLEMENTED IN ENSURING COMPLAINCE TO SAFETY REGULATIONS. Please indicate you level of agreement that the behaviour listed below have been displayed in the municipality.

Item	**Strategy**	**I do not know**	**Strongly**	**Disagree**	**Neither agree**	**Agree**	**Strongly**
a)	Employees are being trained regularly on safety issues and programmes	0	1	2	3	4	5
b)	Municipality develops, reviews and enforces safety-related policies	0	1	2	3	4	5
c)	There is management buy-in that assists in safety regulations' compliance	0	1	2	3	4	5
d)	Safety signs around the municipality	0	1	2	3	4	5
e)	All stakeholders (employees, management, council, DEL and etc) participate in the safety management system within the municipality	0	1	2	3	4	5
f)	Enough budget allocated to address safety issues that form part of the service delivery budget implementation plan (SDBIP) in the integrated development plan (IDP)	0	1	2	3	4	5
g)	Personal protective equipment/clothing (PPE/C) of quality standards as per South African Bureau of Standards (SABS)	0	1	2	3	4	5
h)	Municipality requires OHS practitioner to register with a professional body, such as the South African Institute of Occupational Safety and Health (Saiosh), the Southern African Institute for Occupational Hygiene, etc.	0	1	2	3	4	5

SECTION H: COMPLIANCE WITH COVID-19 REGULATIONS

Q18. For the following statements on COMPLIANCE WITH COVID-19 REGULATIONS. Please indicate you level of agreement that the behaviour listed below have been displayed in the municipality.

Item	Strategy	I do not	Strongly	Disagree	Neither	Agree	Strongly
a)	The municipality fully complies with Covid-19 regulations as regularly reviewed and amended	0	1	2	3	4	5
b)	COVID-19 committee, OHS committee as well as risk management committee meet	0	1	2	3	4	5
c)	Compliance officer appointed and every employee is aware of the appointee	0	1	2	3	4	5
d)	There is an allocated budget for COVID-19	0	1	2	3	4	5
e)	Risk assessment was conducted	0	1	2	3	4	5
f)	The municipality reports the infected employees to the Department of Employment & Labour, and other COVID-19 structures/committees, such as Provincial SALGA, Nkangala District Municipality, National Department of Health and etc	0	1	2	3	4	5
h)	Department of Health 24-hour call centre (0800 029 999) dealing with Covid-19 is provided on many platforms such as the notice boards, website, etc.	0	1	2	3	4	5
i)	At least 70% alcohol-based hand sanitisers, hands-free dispensers, etc. are strategically placed at entrances, and/or doorways, and/or common areas	0	1	2	3	4	5
j)	A daily register is maintained providing the name of the person, address and contact number for the purpose of contact tracing. As well as the temperature screening conducted on all employees, councillors and visitors using	0	1	2	3	4	5

	a thermometer, wherein should a person be above 38c, she/he will not be permitted to enter the premise but will be advised to consult for medical attention						
k)	Developed municipal workplace/Operational plan	0	1	2	3	4	5
l)	Sourcing of a dedicated OHS professional service provider to address COVID-19	0	1	2	3	4	5
m)	Employees are ready, willing, and comfortable to vaccinate	0	1	2	3	4	5

SECTION I: THE USE OF HAZARDOUS CHEMICAL SUBSTANCES IN SOME UNITS WITHIN THE MUNICIPALITY

Q19. For the following statements on THE USE OF HAZARDOUS CHEMICALS IN LINE WITH GOVERNMENT GAZETTE NO. 25130. Please indicate you level of agreement that the behaviour listed below have been displayed in the municipality.

Item	Strategy	I do not	Strongly	Disagree	Neither	Agree	Strongly
a)	Assessment of potential safety exposure and risk	0	1	2	3	4	5
b)	Guidance on handling and training conducted relating to the use of substances	0	1	2	3	4	5
c)	Prohibitions, such as smoking, eating, drinking or keeping food or beverages in a respirator zone or permitting any other person to smoke, eat, drink or keep food or beverages in that zone	0	1	2	3	4	5
d)	There is labelling, packaging, transportation and storage in accordance with South African Bureau of Standards (SABS) codes such as SABS 072 and SABS 0228, and also compliance with South African Bureau of Standards codes relating to hazard chemicals	0	1	2	3	4	5
e)	Disposal of hazardous chemical substances in line with the Environmental Conservation Act, 1989 (Act No. 73 of 1989) and other related pieces of legislations	0	1	2	3	4	5

f)	There is a penalty for offences and non-compliance with regulations	0	1	2	3	4	5
g)	Always wearing PPE/C, such as boots, safety hat, respiratory protective equipment, etc.	0	1	2	3	4	5
h)	Employees undergo medical surveillance yearly and when the need arises, and records are kept of the results of all assessments by the municipal occupational health & safety practitioner	0	1	2	3	4	5

Thank you for taking part in this survey.

Appendix B: Ethics clearance certificate

Appendix C: DRJSMLM approval letter

Appendix D: Language editing certificate