



UNIVERSITY
of
LUSAKA

SCHOOL OF POSTGRADUATE STUDIES

**FIRE INCIDENT PREPAREDNESS BY KABWE MUNICIPAL COUNCIL:
A CASE STUDY OF KABWE DISTRICT**

**A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES,
UNIVERSITY OF LUSAKA IN PARTIAL FULFILLMENT OF REQUIREMENT OF THE
AWARD OF MASTER OF PUBLIC ADMINISTRATION (MPA)**

BY

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APPROVAL STATEMENT

I confirm that the research paper was done by the student under my supervision.

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DATE: 30/01/25

DECLARATION

I **Mwanida Banda**, Student Number MPA23119818 declare that this research paper is my own work. This dissertation is submitted in Partial Fulfilment for the Requirement of the Program Master of Public Administration (MPA). It has not been submitted before for any degree or examination at any university or college.

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DEDICATION

This dissertation is lovingly dedicated to my devoted husband, Dr. Alick Rabson Gumbo, and our precious children, Dubekile and Khulan'ga. Your steadfast support, encouragement, and boundless love have been my greatest source of strength and motivation throughout this journey.

ACKNOWLEDGEMENT

Undoubtedly this has been made possible through the willing assistance of several individuals. I wish to express my sincere thanks and profound gratitude to Dr. George Mudimu for the trust, guidance and encouragement he was able to provide me with at every stage of this study.

The Fire Brigade Officials of Kabwe Municipal Council and the Council itself deserve my heartfelt thanks for the help and cooperation extended to me as I was researching on this topic.

Last but not least, my acknowledgement cannot be complete without thanking all the respondents who participated and provided information for the conduct of this study.

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LIST OF ACRONYMS

AFSA - African Fire Safety Association

FEMA - Federal Emergency Management Agency
IAFC - International Association of Fire Chiefs
IDM - Institute for Disaster Management
IFSSC - International Fire Safety Standards Coalition
IPCC - Intergovernmental Panel on Climate Change
KMC - Kabwe Municipal Council
PMT - Protection Motivation Theory
SACN - South African Cities Network
SADC - Southern African Development Community
TIZ - Transparency International Zambia
ZLGA - Zambian Local Government Association

ABSTRACT

This research examined the preparedness of Kabwe Municipal Council (KMC) to fire incidences both in the central business district and in the rest of the community. Since fire incidences have a great threat to life, properties, and even the economy, the research sought to evaluate KMC's readiness level to avoid, respond and assist in the recovery from fires. The objectives of the study were to: (i) assess the current level of fire incidence preparedness by Kabwe Municipal Council in the central business district and local community; (ii) identify the challenges and limitations faced by Kabwe Municipal Council in implementing fire safety measures and; (iii) propose recommendations for enhancing fire incidence preparedness in Kabwe central business district. The study used exploratory sequential mixed methods design, as such mixed-methods involving two methods namely qualitative and quantitative methods were utilized. Two types of data collection methods were included in the study, which are; interviews and questionnaires. The study found that the current level of fire incidence preparedness by Kabwe Municipal Council in the central business district and local community was moderate. This is because Kabwe Municipal Council did not have enough fire fighting equipment and firefighters to manage the whole district. However, the council had made commendable efforts in public awareness campaigns, training, and emergency response mechanisms. The study also found that Kabwe Municipal Council faces many challenges and limitations in responding to fire safety measures such as poor road network, limited water supply, communication issues, lack of fire stations, requests taking long to be granted, political interference and lack of sufficient fire equipment. This paper concludes with a number of recommendations, such as upgrading of firefighting facilities, executing campaigns for public awareness and working with communities together with foreign business. These actions are necessary to increase the ability of Kabwe to deal with fire emergencies without compromising its socio-economic growth.

Keywords: Fire, Preparedness, Emergency, Risk, Mitigation.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

The chapter discusses the background to the study, statement of the problem and the objectives. It further outlines the research questions, significance of the study and scope of the study.

1.1 Background to the Study

Fire outbreaks have risen to a worldwide attention in recent years as both an environmental and economic issue (Agyekum *et al*, 2016). According to Mafoko (2021), he argued that a complete protection of life and property from fire in the built Environment is unachievable, and even if achievable, it is prohibitively expensive. Disaster resilience has become a critical concern for local authorities worldwide, as the impact of natural disasters continues to rise.

In a world with cities constantly experiencing growth of varying proportion where there are fast growth in urban places of all sizes from small market centres to mega-cities, Mukasa *et al.*, (2020) perceived that this increased developments and interaction worsens the potentiality of fire occurrences, consequently causing fire disasters.

According to Mwewa *et al.*, (2022), examples of major fires that have occurred in Zambia include the gutting of Society House in 2021, Cabinet Office was also gutted in the same year, Chisokone Market in Kitwe in 1998, Indeni Oil Refinery in 2000 and the Hydroelectric Plant in Kafue Gorge in 2008. Lives have been lost due to the fires and damage to property worth billions of Kwacha has been experienced. The response to fire incidences has not been satisfactory. In most cases, the fire men and women have watched hopelessly as buildings and properties get burnt to ashes (Chowdhury, 2020).

One of the major fires that occurred in Kabwe district in 2023 happened in Kabwe central business district on 18th August, 2023 around 00:30 hours. Eight shops with

goods worth millions of kwacha were completely lost in this fire (Mwewa, 2023). Kabwe Municipal Council faces the challenge of enhancing its fire incidence preparedness to protect its residents and infrastructure. The concept of fire disaster preparedness is crucial in reducing destruction to assets, populations, and maintaining the built environment in a safe condition to achieve sustainable disaster management practices. As evident from both global and local examples, the causes of fire incidents can vary across nations, and so can the level of preparedness to respond effectively.

Early alert systems and community involvement have been identified as key approaches to disaster risk reduction. This is particularly important for rural and marginalized communities, where local authorities play a crucial role in facilitating disaster resilience (Adusei, 2018).

In Zambia, the Ministry of Local Government is in charge of the administration and operations of all district, city and municipal fire brigades. Under the Local Government Act of 1995, the Ministry of Local Government contributes to equipping, provision of training, maintenance and running costs of fire brigades (Mafoko, 2021). In the case of Kabwe District, Central Province, understanding the current state of fire incidence preparedness and the factors influencing it is crucial. Nahayo et al, (2016) argued that community involvement and early alert systems have been shown to be effective approaches to disaster risk reduction in other contexts, such as Rwanda.

It is against this background that the study sought to determine fire incidence preparedness by Kabwe Municipal Council. Examining the role of Kabwe Municipal Council, its policies, resource allocation, and coordination with the local community can provide insights into the fire incidence preparedness in the district. Exploring the challenges and opportunities faced by the council in enhancing fire incidence preparedness can inform strategies to improve disaster resilience in the region.

Moreover, the findings of this research will have the potential to inform policy decisions, guide resource allocation, and drive the implementation of targeted interventions aimed at revitalizing the district's capacity to prevent and respond to fire incidents effectively. Through a collaborative effort to enhance fire safety and preparedness, Kabwe community can strive towards a safer, more resilient urban environment that fosters the wellbeing and prosperity of its residents.

1.2 Statement of the problem

Fire incidents pose a significant threat to lives and property in urban areas, including Kabwe Central Business District and its local community (Bandura, 2021). Although fire incidents in Kabwe are a serious threat to people's lives, property, and infrastructure, the Kabwe Municipal Council is still not adequately prepared to handle such emergencies. Kothari (2020) noted that increased vulnerability and slower response times are caused by a lack of community awareness of fire safety, inadequate training, and limited resources. Public safety is put at risk, livelihoods are disrupted, and residents, businesses, and institutions are all impacted by this insufficiency. In addition to making fire outbreaks more devastating, a weak preparedness plan erodes public trust in the council's capacity to protect the neighborhood (Rogers, 2020). Nevertheless, despite efforts by the Kabwe Municipal Council to enhance fire incidence preparedness, there remains a lack of comprehensive understanding of the current level of preparedness and the challenges faced in mitigating fire risks. Hence the need to conduct this study.

1.3 Research Objectives

1.3.1 General Objective

To investigate the fire incidence preparedness strategies of the Kabwe Municipal Council.

1.3.2 Specific Objectives

The Specific objectives of the study were to:

1. Assess the current level of fire incidence preparedness by the Kabwe Municipal Council in the central business district and local community.
2. Identify the challenges and limitations faced by the Kabwe Municipal Council in implementing fire safety measures.
3. Propose recommendations for enhancing fire incidence preparedness in the Kabwe central business district.

1.4 Research Questions

The following were the research questions of the study:

1. What is the current fire incidence preparedness measures in place by the Kabwe Municipal Council?
2. What are the challenges faced by the Kabwe Municipal Council in implementing effective fire safety measures?
3. What recommendations can be made to improve fire incidence preparedness in the Kabwe central business district?

1.5 Significance of the study

Fire incidents pose a significant threat to lives and property in urban areas, including Kabwe Central Business District and its local community. Despite efforts by Kabwe Municipal Council to enhance fire incidence preparedness, there remains a lack of comprehensive understanding of the current level of preparedness and the challenges faced in mitigating fire risks. This study sought to address this gap by assessing the existing level of fire incidence preparedness by Kabwe Municipal Council and identifying key challenges and opportunities for improvement. By doing so, the study aims to contribute to the development of effective strategies for enhancing fire safety and preparedness in Kabwe District.

Additionally, the study aims to make significant contributions to academic research by providing a comprehensive analysis of fire preparedness in urban settings. It will offer

valuable insights for the community by identifying practical measures to enhance fire safety and preparedness.

Furthermore, the findings will be beneficial to Civil Society Organizations by highlighting areas where they can support and collaborate with Local Authorities to improve fire risk mitigation efforts.

1.6 Scope of the study

According to Rogers (2022), the scope of a study covers the parameters within which the research will be conducted and the extent to which the research area will be explored. The study focused specifically on Kabwe central business district and its local community in the fire incidence preparedness measures implemented by Kabwe Municipal Council. The research was undertaken for a period of 1 month.

The research also involved a detailed evaluation of the resources and infrastructure available for fire prevention and response, including the competence of fire stations, equipment, finances and personnel. By conducting interviews with local residents, business owners, and fire officials, the study aimed to gather diverse perspectives on the effectiveness of current fire preparedness strategies.

Furthermore, the study explored the role of community engagement and public awareness in enhancing fire safety. It also assessed the level of knowledge and preparedness among the local population and identify opportunities for education and training programs to improve community resilience.

1.7 Limitations of the Study

This study on fire incidence preparedness by Kabwe Municipal Council faced several limitations. Due to limited time and resources, the researcher could only manage to interview 30 respondents, which may not fully represent the perspectives of all stakeholders involved in fire preparedness. Additionally, access to certain key documents and data was restricted, making it difficult to conduct a comprehensive

analysis of fire response strategies. Some respondents were also unavailable or unwilling to participate, which may have affected the depth of information collected.

1.8 Definition of Key terms and concepts

According to Smith & Petley (2022), disaster preparedness involves planning, equipping, training, and exercising response capabilities to mitigate adverse impacts. Alexander (2022) highlights preparedness as one of the key components of disaster risk reduction.

Kabwe Municipal Council -The Local Government body responsible for managing public services, including fire safety and emergency response, within Kabwe District, (Republic of Zambia, Local Government Act, 2019.

Bryant & Hall (2017), defines Emergency management as a coordinated approach involving planning, resource management, and training.

Cannon & Schmidlein (2019) defined CBD as the heart of the city where the greatest concentration of offices and retail stores are found, reflected in the cities highest land values and tallest buildings.

Drabek & McEntire (2023) defined community engagement as a process of working collaboratively with and through groups of people affiliated by geographic proximity, special interest, or similar situations to address issues affecting their well-being".

1.9 Summary of the Chapter

The chapter has discussed the background of the study, statement of the problem, research objectives and research questions. The chapter also looked at the scope of the study, significance of the study and definition of key terms. The next chapter discusses literature review in relation to fire incidence preparedness.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviewed the literature from various sources to enable the researcher know what others have done about the research topic. Literature review was gathered from different sources which included journals, articles, published books, newspapers, reports, internet and various other sources. By reviewing various literature, the researcher was able to identify the existing knowledge gap. The chapter therefore, reviewed literature in relation to the objectives of the study.

2.1 The level of fire incidence preparedness

2.1.1 Global Perspective

A study conducted by Adebayo (2017) found that globally, fire incidence preparedness has emerged as a critical aspect of disaster management worldwide. In developed nations like the United States, Australia, and Japan, Oduro (2016) noted that preparedness levels are high due to robust infrastructure, advanced technology, and significant investments in public awareness campaigns. For instance, Adusei (2018) noted that the U.S. Federal Emergency Management Agency (FEMA) implements community-based fire drills and preparedness training. Similarly, a study conducted by Cote (2012) in Australia's found that Bushfire Management Strategy integrates satellite monitoring and community engagement to reduce fire risks. In Japan, Haddow *et al* (2020) found that fire preparedness is deeply ingrained in urban planning, with fire-resistant building codes and regular evacuation drills. These nations demonstrate how technological innovation and community participation can mitigate fire-related disasters.

In contrast, a study by Mthembi (2021) found that many developing nations struggle with fire preparedness due to limited resources and weak governance structures. For example, Cote (2012) found that countries like Bangladesh and Indonesia face frequent fire incidents in densely populated areas due to poor urban planning and lack of fire

safety compliance. Research by Chowdhury (2020) highlights that factory fires in Bangladesh's garment industry could be minimized with better enforcement of fire safety regulations. Similarly, Indonesia's peatland fires often result from inadequate land management and limited disaster response capacity (Cote, 2012).

2.1.2 African Perspective

According to Cote (2012), Africa faces unique challenges in fire incidence preparedness, driven by rapid urbanization, informal settlements, and limited financial resources. Countries such as Nigeria and Kenya report frequent fire outbreaks in urban slums, markets, and industrial areas. In Nigeria, Mthembi (2021) found that market fires in cities like Lagos and Onitsha are often attributed to faulty electrical wiring and overcrowded conditions. Studies by Okonkwo and Chukwuemeka (2019) emphasize the need for stricter enforcement of fire safety standards and public education campaigns.

A study conducted by Mthembi (2021) in South Africa found out that the country stands out as a leader in fire preparedness on the continent. Its municipalities, such as Cape Town, have invested in fire risk assessments, community awareness programs, and well-equipped fire departments (Adusei, 2018). However, Oduro (2016) noted that even South Africa faces challenges in rural and informal areas where resources are scarce. The integration of traditional knowledge with modern fire management practices in South Africa offers valuable lessons for other African nations like Zambia.

2.1.3 Regional Perspective

A study conducted by Oduro (2016) in Southern Africa found that the prevalence of wildfires and urban fires poses significant risks to communities and ecosystems. Botswana and Namibia, for example, experience frequent bushfires during the dry season, exacerbated by climate change and human activities. A study by Mafoko (2021) in Botswana highlights the effectiveness of community fire brigades in reducing fire incidences in rural areas. Namibia has adopted satellite monitoring systems to detect and manage wildfires, though funding constraints limit their scalability (Adebayo, 2017).

Mozambique faces urban fire risks, particularly in informal settlements in Maputo, where densely packed housing and limited access to water hinder firefighting efforts (Okonkwo & Chukwuemeka, 2019). The government's recent partnership with international NGOs aims to improve fire safety education and provide basic firefighting equipment to vulnerable communities. Zambia, which shares similar environmental and socio-economic challenges, can draw lessons from these regional experiences.

2.1.4 Zambian Perspective

In Zambia, Chanda (2018) noted that fire incidence preparedness remains a pressing issue, particularly in urban areas like Lusaka and Kitwe. Informal settlements are highly vulnerable due to overcrowding, poor electrical wiring, and limited access to firefighting services (Mukasa *et al.*, 2020). The Lusaka City Council has initiated fire safety education campaigns, but these efforts are often underfunded and lack widespread reach.

A study by Chanda (2018) found that rural areas in Zambia face unique challenges, including wildfires during the dry season. The Ministry of Lands and Natural Resources has introduced policies to promote sustainable land management practices, but enforcement remains weak. Studies by Mwewa *et al.* (2022) highlights the need for community involvement and increased investment in firefighting infrastructure to address these challenges effectively.

2.2 Challenges faced by local government in implementing fire safety measures

2.2.1 Global Perspective

Alexander (2022) pointed out that globally the implementation of fire safety measures is a critical function of local governments worldwide. However, Bandura (2021) noted that numerous challenges impede the effective adoption and enforcement of these measures. Globally, Chowdhury (2020) found that one of the primary issues is the lack of adequate funding. According to a study by the International Association of Fire Chiefs (IAFC), many local governments in both developed and developing nations struggle to allocate sufficient budgets for fire safety programs, infrastructure, and training (IAFC,

2020). Inadequate resources often result in poorly equipped fire departments and outdated fire prevention technologies.

Drabek & McEntire (2023) pointed out that another significant challenge is the gap in regulatory enforcement. While many countries have established fire safety codes and standards, compliance remains a significant issue due to limited inspection capacity and corruption (International Fire Safety Standards Coalition, 2022). Furthermore, urbanization has outpaced fire safety planning in many cities. Rapid urban growth often leads to informal settlements that lack proper fire safety provisions, increasing the risk of catastrophic fire events (UN-Habitat, 2021).

Haddow *et al.*, (2021) asserted that climate change also exacerbates fire risks, particularly in areas prone to wildfires. Local governments in regions such as California, Australia, and the Mediterranean have faced challenges in adapting to the increasing frequency and intensity of wildfires due to insufficient preparedness and limited inter-agency coordination (IPCC, 2021).

2.2.2 African Perspective

In Africa, Kothari (2020) noted that the implementation of fire safety measures is hindered by a combination of economic, social, and institutional challenges. According to Leedy & Ormond (2024), a critical issue is the prevalence of informal settlements, which house a significant portion of the urban population. These settlements often have poor infrastructure, including inadequate access to water and narrow roads that prevent fire trucks from accessing affected areas (UN-Habitat, 2019).

Additionally, Mafoko (2021) found that local governments in Africa often face capacity constraints. A study by the African Fire Safety Association (AFSA) found that fire departments in many African cities are underfunded, understaffed, and lack modern equipment (AFSA, 2020). This situation is further compounded by low public awareness of fire safety practices, leading to unsafe behaviors such as the use of open flames and illegal electrical connections.

Okonkwo & Chukwuemeka (2019) noted that institutional challenges also play a significant role. Many African countries lack comprehensive fire safety policies, and enforcement mechanisms are weak. Corruption within local governments can undermine the implementation of fire safety measures, as funds meant for fire safety are often diverted or mismanaged (Transparency International, 2021).

2.2.3 Regional Perspective

In the Southern African region, Rogers (2020) found that the challenges faced by local governments in implementing fire safety measures are particularly pronounced. In countries such as South Africa, Botswana, and Namibia Smith & Smith (2019) noted frequent fire incidents, often attributed to urbanization and industrial activities. In South Africa, for example, fire outbreaks in informal settlements and industrial areas have highlighted the inadequacies in fire prevention and response systems (South African Cities Network, 2020).

Moreover, Smith & Smith (2019) found that regional cooperation in fire safety is limited. While the Southern African Development Community (SADC) has frameworks for disaster risk management, fire safety is often overlooked as a priority. Local governments in the region also face challenges in accessing regional funding and technical support for fire safety initiatives (SADC, 2019).

In Zimbabwe, Alexander (2022) found that the lack of training and professional development for fire service personnel is another critical issue. Many fire departments in the region rely on outdated training curricula that do not address modern fire risks, such as chemical fires and wildfires (Institute for Disaster Management, 2020). This knowledge gap undermines the effectiveness of fire response and prevention efforts.

2.2.4 Zambian Perspective

In Zambia, a study by Zimba (2019) found that local governments encounter several unique challenges in implementing fire safety measures. The limited financial resources allocated to municipal councils severely restrict their ability to invest in fire safety

infrastructure and equipment. According to the Zambian Local Government Association (ZLGA), most fire departments in the country operate with insufficient fire trucks, protective gear, and communication tools (ZLGA, 2022). The prevalence of informal settlements, particularly in urban areas such as Lusaka and Ndola, poses a significant risk. These settlements lack basic infrastructure, including accessible roads and water supply, making it difficult for fire services to respond effectively to emergencies (UN-Habitat, 2021).

Additionally, Zimba (2019) found that there is a lack of public awareness about fire safety. Educational campaigns on fire prevention are minimal, and the enforcement of fire safety regulations is weak (Mukasa *et al.*, 2020). Corruption within local government structures further exacerbates these challenges, as funds intended for fire safety are often misappropriated (Transparency International Zambia, 2021).

Another notable challenge in a study conducted by Chanda (2018) is the absence of a comprehensive fire safety policy. While Zambia has some regulations on fire safety, they are fragmented and poorly enforced. Mukasa *et al.*, (2020) found that the lack of coordination among stakeholders, including local governments, the private sector, and civil society, further undermines fire safety efforts in the country.

2.3 Recommendations for enhancing fire incidence preparedness

Alexander (2022) notes that forging a fire safety strategy is essential for urban environments, and a number of researchers note the important role that strong engagement plans have regarding fire incidences. The icing on the cake would be best practices that have seen a rapid evolution over time, with a focus on emergency response and safety coverage (Bandura, 2021). In a 2020 study, Chowdhury elaborated on the strategies that can be employed to minimize the damage caused by fire incidences, with a core focus being on community education and regular drills. By taking the initiative to work with municipal councils, Haddow *et al.*, (2021) believes that firefighters and community managers can work together to mitigate such incidences.

Moreover, cities are incredibly diverse and face unique social and economic challenges and as such, there is no single best way – Adusei (2018) notes, fire safety best practices should be adopted. Ensuring building codes and other regulations are up to standard and enforced, should greatly assist in reducing fire related risks in urban regions (Haddow *et al.*, 2021).

Governance of fire safety is unique in each region which gives precise clarity on why fire safety and preparedness lies at the heart of municipal councils impersonating it as a primary role when it comes to urban areas (Mafoko, 2021). According to Kothari (2020), local Governments can mitigate the increasing risk of fire in Central Business Areas and protect the health of residents and businesses by evaluating the current efforts and outlining areas of improvement.

2.4 Theoretical framework

This study was guided by Protection Motivation Theory (PMT). Introduced by Rogers in 2020, it explains how individuals assess threats and decide on protective behaviors to reduce risk (Rogers, 2020). The theory is grounded in cognitive processes that evaluate two main factors: the perceived severity and vulnerability of a threat and the perceived efficacy of a coping response. PMT suggests that individuals are motivated to act protectively when they:

- Recognize the severity of the threat (e.g., the potential loss or harm caused by a fire).
- Feel personally vulnerable or at risk (e.g., understanding how fire incidents can directly impact them).
- Believe that the recommended protective measures are effective (response efficacy).
- Feel capable of performing these measures (self-efficacy).

These cognitive processes are influenced by both intrinsic (e.g., fear of harm) and extrinsic (e.g., regulations, social norms) rewards or penalties for adopting protective

behaviors (Rogers, 2022). PMT emphasizes the balance between the perceived costs of action (e.g., time, resources) and the benefits of taking protective steps.

Smith & Smith (2019) noted that PMT is particularly suitable for understanding fire preparedness because it integrates perceptions of threat and coping into actionable behaviors. Fire incidents are highly preventable, yet preparation often depends on how communities and institutions like Kabwe Municipal Council assess risks and implement preventive measures (Smith & Petley, 2022). By using PMT, this study can explore how fire preparedness is influenced by perceived risk (e.g., frequency and consequences of fires), response efficacy (e.g., firefighting capabilities), and self-efficacy (e.g., staff training and resource adequacy). The theory provides a structured way to examine why individuals or institutions take—or fail to take—preventive actions.

Despite its utility, PMT has notable limitations when applied to fire preparedness in a municipal context. The theory assumes that individuals and organizations make decisions based solely on rational cognitive processes (Kothari, 2020). However, emotions, cultural beliefs, and unconscious biases often influence behavior. For example, fear or complacency might override logical evaluations of fire risk. Moreover, Kothari (2020) noted that PMT does not adequately address structural or systemic barriers that may hinder protective actions. In the case of Kabwe Municipal Council, factors such as budget constraints, lack of political will, or bureaucratic inefficiencies might impede preparedness, even when the cognitive conditions for action are met.

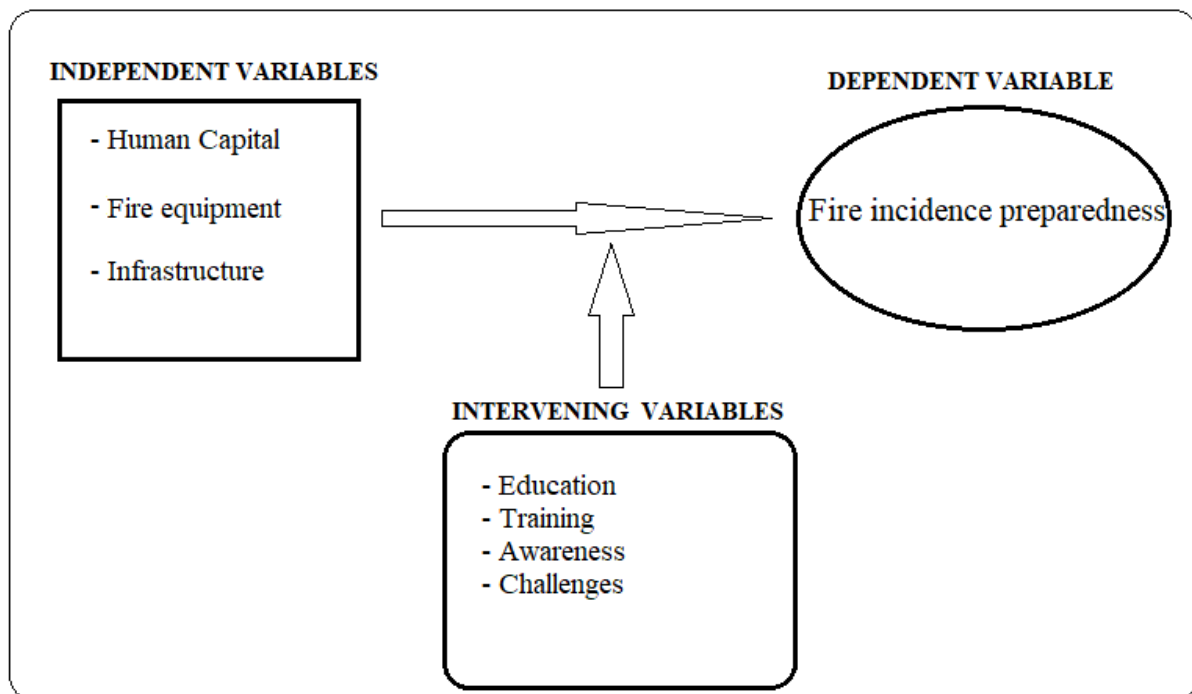
Rogers (2020) noted that measuring the key components of PMT —such as perceived severity, vulnerability, and self-efficacy —can be challenging, especially in diverse or resource-limited settings like Kabwe. Variations in individual and collective perceptions may complicate data collection and analysis, limiting the reliability of findings (Bandura, 2021). While PMT focuses on individual decision-making, fire preparedness often involves collective action at the institutional level. Organizational dynamics, interdepartmental coordination, and stakeholder engagement are critical factors that

PMT does not explicitly address, necessitating adaptation of the theory to fit the broader municipal context.

Nevertheless, Kothari (2020) noted that PMT offers a valuable lens for understanding fire incidence preparedness in Kabwe District by highlighting the cognitive processes that drive protective behavior. Its emphasis on threat appraisal and coping mechanisms provides a structured approach to analyzing the motivations behind preparedness efforts. However, Leedy & Ormond (2024) believes that its limitations, such as the exclusion of emotional, systemic, and organizational factors, underscore the need for complementary frameworks or adjustments to address the complex realities of municipal fire preparedness. By leveraging PMT alongside contextual considerations, this study can contribute to the development of more effective strategies for mitigating fire risks in Kabwe District.

2.5 Conceptual framework

Figure 2.1: Conceptual Framework



Source: Conceptualized by the author (2025)

For this study, human capital, fire equipment and infrastructure are independent variables. On the other hand, the dependent variable is fire incidence preparedness. The intervening variables are education, training, awareness and challenges faced by fire fighters at Kabwe municipal Council. These intervening variables can pose a negative impact on both independent and dependent variables which can lead to poor handling of a fire.

2.6 Summary of the Chapter

This chapter discussed review of related literature on fire incidence preparedness under the following subheadings: The level of fire incidence preparedness, challenges faced by local government in implementing fire safety measures, recommendations for enhancing fire incidence preparedness, theoretical framework and conceptual framework. As discussed in this literature review, it can be seen that fire is caused by a number of factors and usually leads to destruction of property, injuries and even fatalities. However, there is limited literature on fire incidence preparedness by municipalities in Zambia. Hence the need to carry out this study. The next chapter, however, discusses the methods used to carry out this research.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter contains, describes and justifies methods which includes strategies that have been used in the study under the headings: research design, target population, sample size, sampling technique and data collection/instruments. Moreover, it outlines how the data was analyzed in order to respond to the study questions. An explanation of how the researcher adhered to research ethics during the data gathering procedure is also provided.

3.1 Research Design

The study used exploratory sequential mixed methods design, as such two methods namely qualitative and quantitative methods were utilized. According to Bell (2016), merging both quantitative and qualitative designs enhanced a researcher ability to explore a subject within broader scope since each enables an understanding of the other better. The collection of measurable data to strengthen the research design which was statistically evaluated for trends and patterns was made possible by the quantitative facet. The qualitative facet on the other hand offered a detailed and rich capacity of experiences, feelings and challenges met by the participants in relation to preparedness towards a fire incidence. Integrating both thus sought to substantiate qualitative findings with quantitative data as a result enhancing the understanding of levels of fire preparedness in general.

3.2 Target Population

A target population refers to the entire group of individuals or entities that a researcher aims to study and draw conclusions about (Borg and Gall, 2017). All staff working under fire department at Kabwe Municipal Council, the local community and business people in Kabwe central business district made up the target population.

3.3 Sample Size

A sample size refers to the subset of the target population selected for inclusion in a study to represent the whole group and provide reliable and valid findings (Cohen and Manion, 2024). For this study, the 30 participants in this study were distributed as follows: 1 Chief Fire Officer, 14 Fire Officers, 5 Businessmen and 10 members of the community. The choice of including these different categories of respondents aligns with the exploratory sequential mixed methods design, which focuses on a manageable yet representative subset to provide in-depth analysis. The sample size was determined based on practical considerations like available resources, time constraints, and the specific objectives of the study. Instead of relying on a strict mathematical approach, the author used judgment, industry standards, or previous research to decide on a reasonable sample size that would still give reliable results. The distribution ensures adequate representation from each group while allowing for meaningful comparisons between fire department and stakeholder categories.

3.4 Sampling technique

In order to choose a subset of people or units from a target population to take part in a research project, sampling procedures are employed to make sure the sample is representative and in line with the goals of the study (Khombo and Tromp, 2016). Since the results may be extrapolated to a larger group, data from Fire Officers, the businessmen and community members was gathered using a random sampling technique. According to Leedy & Ormond (2024), random sampling is completely objective and free from personal bias. Individuals were selected at random from the population with the same chance of being selected as every other member of the population. Data from the Chief Fire Officer was collected through the use of purposeful sampling. Purposive sampling involves carefully choosing the data to include in the study based on its objectives.

3.5 Data collection

The study collected both secondary and primary data. Primary data was collected through the use of interview guide and questionnaires. Questionnaires were administered to Business people and members of the community which gave the true picture of what the business environment and local residents perceived the Kabwe Fire Brigade in terms of its availability to fire calls and general work ethics.

Interviews were conducted with the Fire Officers to give answers related to fire incidence preparedness by Kabwe Municipal Council. Moreover, these interviews assisted in cross checking and validating information against the accurate version of events. This method allowed the researcher to probe further and seek clarifications when necessary. The research rightfully points out that it is appropriate to employ structured interviews for this purpose as it permits low variability in response quality and high response accuracy. During interviews and discussions, a tape recorder was used so as to ensure that contributions made by interview participants were well documented. On the other hand, reports, journals, dissertations and other literature in print were some of the sources for obtaining secondary data.

3.6 Data Analysis

According to Mugenda and Mugenda (2023), data analysis is the process of giving a substantial amount of data organization, order, and significance. Microsoft Excel and SPSS version 21.0 were used to examine the data gathered. In this study, the authors carried out thematic and narrative analysis. Thematic approach comprises of interpreting, identifying, and analyzing key themes by coding the collected data. The narrative approach involved documenting insights obtained from the Chief Fire Officer's interview on fire incidence preparedness. Furthermore, frequency tables and bar charts aided in analyzing the questionnaire sociographic variables such as gender, age, and educational level. These tools assist in determining the most frequently provided answers which allow the researcher to make interpretations from the most recurrent activities.

3.7 Ethical considerations

According to Leedy & Ormond (2024), ethics are defined as standards or rules of conduct directing moral decisions regarding one's behavior and interactions with others. Ethical considerations were taken into account throughout the research process, including obtaining informed consent from participants and ensuring confidentiality. The research upheld ethical conduct by ensuring informed permission was obtained, confidentiality upheld, privacy respected, and anonymity maintained. Strict anonymity was ensured to protect all information related to the identity and characteristics of the respondents. Additionally, the information collected was used solely for the purposes of this research study. In addition, a written consent was obtained from Kabwe Municipal Council to conduct the study.

3.8 Summary of the Chapter

In this chapter, the methods of data collection were discussed. To collect primary data, questionnaires and interviews were employed. Secondary data was gathered from books, journals, the internet, reports, newspapers, and conference proceedings. The sample strategy employed in this investigation was the random sampling technique. The collected data was examined using SPSS and Excel. The chapter also provides justification for the use of both qualitative and quantitative analysis techniques. Data gathered from respondents within Kabwe central business district, the local community and KMC is presented in the next chapter.

CHAPTER FOUR

DATA PRESENTATION

4.0 Introduction

This chapter presents the outcomes of the study. The study collected views from the Chief Fire Officer, Fire Officers, Business people and the community on fire incidence preparedness by Kabwe Municipal Council. Structured interviews and questionnaires were employed in data collection. The objectives of the study were to: (i) Assess the current level of fire incidence preparedness by the Kabwe Municipal Council in the central business district and local community; (ii) Identify the challenges and limitations faced by the Kabwe Municipal Council in implementing fire safety measures and; (iii) Propose recommendations for enhancing fire incidence preparedness in the Kabwe central business district.

4.1 Response Rate

There was a 100% response rate since the researcher collected every questionnaire she had given out. This was due to the fact that respondents were interviewed in person in Kabwe's Central Business District and that questionnaires were self-administered.

Table 4.1: Response Rate

Response	Frequency	Percentage
Answered Questionnaires/Interviews	30	100
Unanswered Questionnaires/Interviews	0	0
TOTAL	30	100

Source: Field Data (2025)

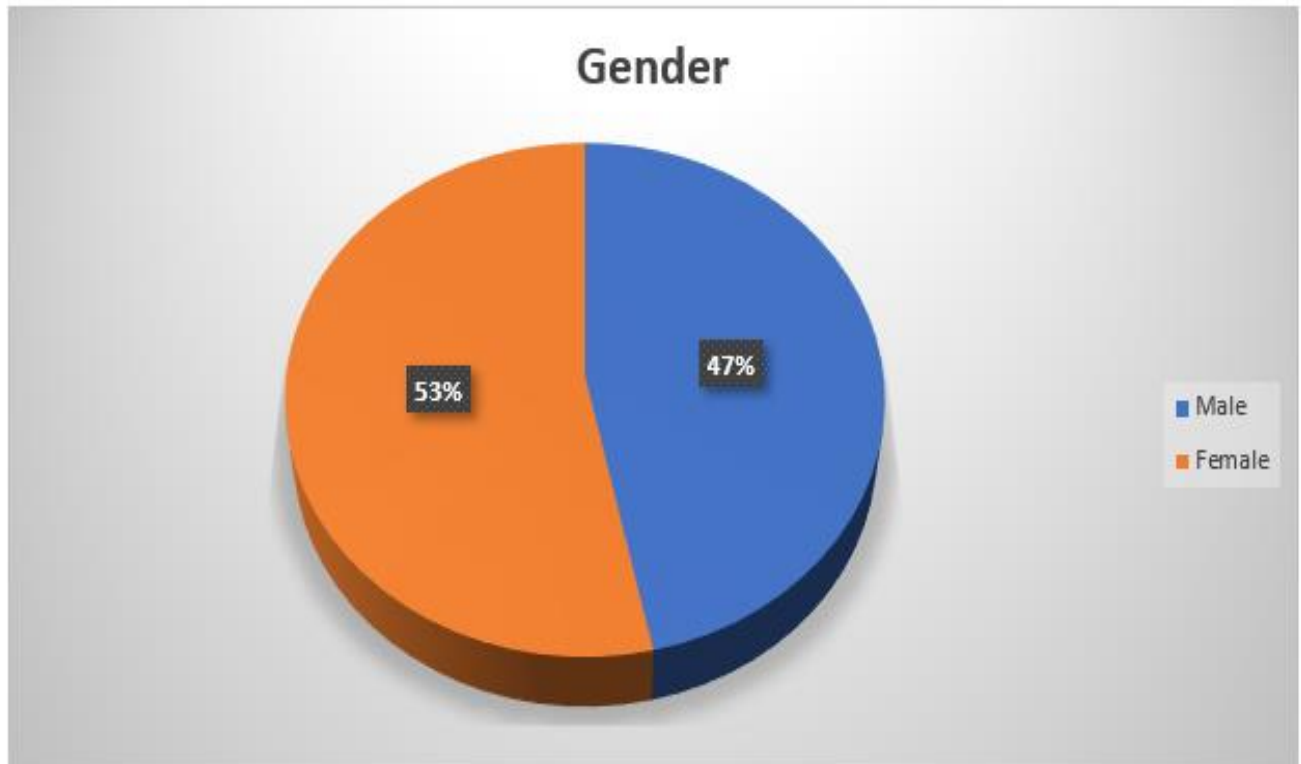
4.2 Demographic Data of Respondents

This section presents the gender, age, marital status and educational background of the respondents who participated in this study. This information was important to support the validity of this study.

4.2.1 Gender

A total number of 30 respondents were targeted during the survey, however, more females were interviewed as compared to the number of males as shown in Figure 4.1:

Figure 4.1 - Gender of Respondents

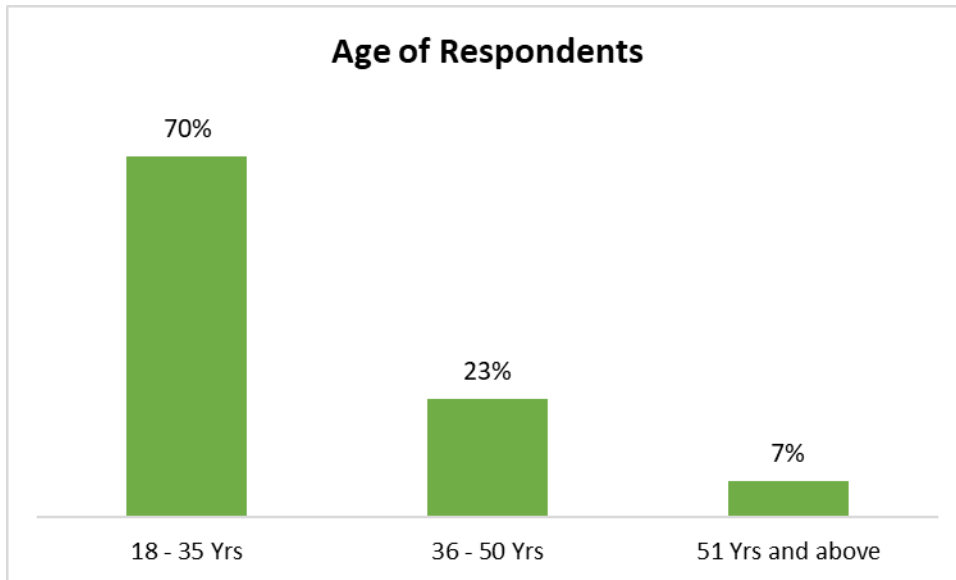


Source: Field Data (2025)

The gender distribution of the respondents was skewed towards the females. Out of the sample of 30 respondents, 16 were females and 14 were males representing 53% and 47% of the total sample population respectively. This information indicates that females were more willing to give information relating to fire incidence preparedness by Kabwe Municipal Council compared to the males.

4.2.2 Age

Figure 4.2 - Age of Respondents



Source: Field Data (2025)

Figure 3 shows the age distribution of the sample population. 21 respondents representing 70% were aged between 18-35 years, 7 of them representing 23% were within the age range of 36-50 years while 2 respondents representing 7% reported to be 51 years and above. This finding shows that the majority of the respondents were youths.

4.2.3 Marital Status

Table 4.2: Marital Status

Response	Frequency (f)	Percentage (%)
Single	11	37
Married	17	57
Divorced	1	3
Widowed	1	3
Total	30	100

Source: Field Data (2025)

The table above shows that 11 (37%) of the respondents were single, 17 (57%) were married, 1 (3%) was divorced and 1 (3%) was widowed. This shows that most of the respondents were married and responsible individuals, hence the responses that were given can be valid and considered to be true for this study.

4.2.4 Level of Education

Table 4.3: Level of Education

Response	Frequency (f)	Percentage (%)
Primary	1	3
Secondary	4	13
Tertiary	25	83
Total	30	100

Source: Field Data (2025)

Table 3 presents statistical information about the level of education among the respondents in the sample population. 25 respondents representing 83% had acquired tertiary education while 4 respondents accounting for 13% of the total sample population had secondary education and 1 respondent representing 3% reported to only have obtained primary education. This shows that since the majority of the respondents had gone up to tertiary level, their responses were valid for this study.

4.3 The current level of fire incidence preparedness by the Kabwe Municipal Council

The first objective of the study was aimed at determining the current level of fire incidence preparedness by Kabwe Municipal Council. The following are the responses that were given by the respondents:

Table 4.4: Level of fire incidence preparedness by the Kabwe Municipal Council

Preparedness Level	Frequency (f)	Percentage (%)
Very Prepared	5	16.70
Moderately Prepared	12	40.00
Not sure	8	26.70
Not Prepared	5	16.70
Total	30	100.00

Source: Field Data (2025)

As shown in the table above, 5 (16.7%) of the respondents said that Kabwe Municipal Council was very prepared for fire incidences, 12 (40%) said it was moderately prepared, 8 (26.7%) said they were not sure and 5 (16.7%) said that it was not prepared.

Respondents who felt very prepared expressed high confidence in their ability to handle fire emergencies. One participant (P18) stated,

"Our department conducts regular fire drills, and we have fully functional equipment, so we feel confident in handling fire emergencies."

This reflects the presence of structured training programs and adequate resources in certain departments, enabling them to respond effectively to potential incidents.

Those who considered themselves moderately prepared acknowledged a basic level of readiness but pointed out critical areas needing improvement. One respondent (P11) remarked,

"We have basic training and some equipment, but there are areas we need to improve, like faster response times and better coordination."

This response suggests that while foundational measures are in place, operational challenges still hinder full preparedness.

Respondents in the somewhat prepared category noted significant gaps in their fire preparedness. One individual (P9) explained,

"We are aware of the risks and have some fire extinguishers, but we lack comprehensive training or a clear action plan for major incidents."

This indicates a level of awareness but highlights the absence of thorough training or detailed emergency response strategies.

Participants who felt not prepared raised serious concerns about the lack of resources and planning for fire emergencies. One respondent (P30) revealed,

"There's no proper fire response strategy here. We don't even have enough extinguishers or trained personnel in case of an emergency."

This shows the urgent need for capacity building and resource allocation to ensure basic preparedness.

4.3.1 Fire Safety Measures Provided by the Brigade

The study was also aimed at determining safety measures provided by the Brigade. The responses are given in the table below:

Table 4.5: Fire Safety Measures Provided by the Brigade

Fire Safety Measure	Frequency (f)	Percentage (%)
Fire Extinguisher Distribution	20	66.7
Fire Drills and Training Programs	15	50.0
Public Awareness Campaigns	18	60.0
Regular Equipment Maintenance	12	40.0
Emergency Contact and Rapid Response	25	83.3
Evacuation Plans for Public Spaces	10	33.3

Source: Field Data (2025)

As shown in the table above, 20 (66.7%) of the respondents said the brigade distributes Fire Extinguishers, 15 (50%) said the brigade conducts Fire Drills and Training Programs, 18 (60%) said the brigade embraces Public Awareness Campaigns, 12 (40%) said the brigade conducts Regular Equipment Maintenance, 25 (83.3%) said the brigade conducts Emergency Contact and Rapid Response while 10 (33.3%) the brigade is involved in Evacuation Plans for Public Spaces.

The Chief Fire Officer laid out the existing fire safety measures given by the fire brigade. He pointed out that;

Such services include constant booster campaigns that seek to enlighten the populace on safeguards against fires in the entire area. In addition to these, the fire brigade performs unannounced checks on business locations to ensure adherence to given standards and laws of fire safety. Such activities are aimed at achieving a prevention culture towards fires and ensuring compliance to burning dangers.

4.3.2 Availability of Firefighting Equipment

A list and quantity of firefighting equipment was made available to the researcher by the Chief Fire Officer at Kabwe Municipal Council.

Table 4.6: Regression Analysis on firefighting equipment and fire incidence preparedness.

		ANOVA ^a				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.541	1	13.541	42.185	.000 ^b
	Residual	31.459	98	.321		
	Total	45.000	99			

a. Dependent Variable: fire incidence preparedness

b. Predictors: (Constant), firefighting equipment

Source: Field Data (2025)

Since the significance (p-value) is 0.00 which is less than 0.001 this means that there is a significant impact of firefighting equipment on fire incidence preparedness. As such, firefighting equipment can minimize fire incidences. The available firefighting equipment at Kabwe Municipal Council is shown in the table below:

Table 4.7: Availability of Firefighting Equipment

Firefighting Equipment	Quantity
Fire Extinguishers	8
Fire Hoses	20
Fire Trucks	2
Smoke Detectors	12
Sprinkler Systems	10
Protective Gear for Firefighters	18
Emergency Water Supply sources	10

Source: Field Data (2025)

A brief report on the equipment used for firefighting in the station by the Chief Fire Officer was made. He said that:

So far, the station had been operating with two fire engines, one for active operations and the other for training only. In addition, there were eight portable fire extinguishers stationed in the building. These portable extinguishers came in handy where it was impossible for fire engines to reach the site due to limited area.

Figure 4.3: Fire Engine used for training purposes



(Source: Field Work, 2025)

It was observed that the station also made use of hydrants to gather water for firefighting. The Chief Fire Officer said that;

The number of hydrants in the district was adequate, however a large number of these were ineffective and in need of repair. The Lukanga Water and Sanitation Company had been engaged on several intervals for repairs and maintenance; however, this had not successfully resolved the issue, and the brigade's activities were significantly impeded.

In response to the question regarding fire related incidents where the equipment failed and consequently the fire could not be put off, the Chief Fire Officer mentioned that such cases were not available.

4.3.3 Training of Fire Staff/Personnel

The study found that Kabwe Municipal Council engages Fire Officers in different trainings in relation to fire fighting. The table below shows the various types of training provided:

Table 4.8: Training of Fire Staff/Personnel

Type of Training Provided	Frequency (f)	Percentage (%)
Basic Firefighting Techniques	24	80%
Advanced Fire Response	18	60%
First Aid and Emergency Care	20	66.7%
Disaster Risk Management	15	50%
Use and Maintenance of Equipment	22	73.3%
Regular Mock Drills	16	53.3%

Source: Field Data (2025)

According to the table above different types of training were provided at Kabwe Municipal Council. Among the trainings provided, 24 (80%) of the respondents said that basic firefighting techniques, 18 (60%) said advanced fire response, 20 (66.7%) said first aid and emergency care, 15 (50%) said disaster risk management, 22 (73.3%) said use and maintenance of equipment and 16 (53.3%) said regular mock drills. The Chief Fire Officer said that:

The brigade carries out simulation of fire in drills and other forms of training for the personnel at intervals of every three months. The goal of carrying out these activities was to improve the members of the fire brigade so that they were able to respond to any type of emergency situation.

4.3.4 Communication methods

The study found that the fire brigade at Kabwe Municipal Council uses many means to inform owners of businesses as well as members of the community about the issues related to fire. Such include the following:

Table 4.9: Communication methods employed by Kabwe Municipal Council

Communication Method	Description	Frequency	Notes
Radio Programs	Explain various means to avoid fires and are aired regularly.	Regular (e.g., weekly)	Aims to educate the public consistently.
Roadshows	Quarterly events for community sensitization.	Quarterly	Engages the public through interactive events.
Print Media	Articles in newspapers and institutional journals to inform the public on fire prevention measures.	As published	Reaches a literate audience for detailed information.
Emergency Hotlines	Paid service for reporting fire breakouts; considered the best option.	On-demand	Charges apply but remain effective for emergencies.
In-Person Reporting	Residents physically visit fire brigade premises to report incidents.	On-demand	Useful for those without phone access.
Public Signals	Alerts coordinated with police and other sectors during emergencies.	As needed	Enhances coordinated responses to fire outbreaks.

Source: Field Data (2025)

4.4 Challenges and limitations in implementing fire safety measures

The second objective of the study was aimed at determining the challenges and limitations faced by the Kabwe Municipal Council in implementing fire safety measures. Cronbach's alpha was used to measure the reliability, or internal consistency of these factors.

Table 4.10: Cronbach's alpha consistency test

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.882	.897	12

Source: Field Data (2025)

A significant alpha (α) coefficient of 0.882 is displayed in Table 9. Khombo and Tromp (2016) advocate an alpha coefficient of at least 0.65 to 0.8 (or higher in many circumstances). This indicates that the respondents' provided factors were in agreement with one another. These answers are therefore highly trustworthy for this research. The outcomes were as follows:

Table 4.11: Challenges and limitations in implementing fire safety measures

Challenge/Limitation	Frequency (f)	Percentage (%)
Poor Road Network	20	66.7%
Limited Water Supply	25	83.3%
Communication Issues	18	60%
Lack of Fire Stations	15	50%
Requests Taking Long to be Granted	12	40%
Political Interference	10	33.3%
Lack of Sufficient Fire Equipment	22	73.3%

Source: Field Data (2025)

As shown in the table above, in relation to challenges faced by the brigade on fire emergency preparedness 20 (66.7%) said poor road network, 25 (83.3%) said limited water supply, 18 (60%) said communication issues 15 (50%) said lack of fire stations, 12 (40%) said requests taking long to be granted, 10 (33.3%) said political interference and 22 (73.3%) said lack of sufficient fire equipment. One respondent (P12) highlighted the challenges posed by the poor road infrastructure, stating,

"The roads are in bad condition, especially in rural areas. This makes it incredibly difficult for fire trucks to reach the scene on time, and by the time they get there, the fire has already spread."

Another respondent (P20) echoed similar concerns, saying,

"The fire trucks often get stuck on the roads, causing delays in responding to emergencies. This is a major setback when trying to protect lives and property."

Several respondents pointed out that the lack of sufficient water supply is a critical issue for firefighting. One respondent (P26) shared,

"There are times when we are unable to contain fires because there simply isn't enough water to put them out. This shortage leaves us relying on limited resources like fire hydrants, which are also not enough."

Another respondent (P27) noted,

"We are constantly facing challenges when fires break out in areas where water is not readily available. It makes responding to fires much harder."

Effective communication is a persistent problem, as described by one respondent:

"When there's a fire, the communication between the fire brigade and other services is often delayed, which makes things worse. By the time information reaches the right people, valuable time has been lost."

Another respondent (P17) emphasized the lack of coordination, stating,

"Sometimes, the fire brigade doesn't get clear instructions or alerts in time, so their response is slow. It's vital for everyone to be on the same page quickly."

The lack of sufficient fire stations is a major limitation, according to respondents. One (P3) remarked,

"We only have a few fire stations scattered around the municipality, so it's very difficult to cover the whole area in a timely manner. A larger network of stations would really help reduce response times."

Another respondent (P1) added,

"In some parts of the city, the fire station is too far away. That delay could be the difference between saving and losing a home or life."

The lack of sufficient firefighting equipment was a significant concern for many respondents. One respondent (P8) explained,

"We don't have enough equipment to handle large-scale fires. Sometimes, we have to rely on outdated fire trucks and equipment that are not as effective."

Another respondent noted,

"Even when we have the necessary equipment, it's often in bad condition and requires repairs. It's frustrating to know that we're not fully equipped to handle fires efficiently."

4.5 Recommendations for enhancing fire incidence preparedness

The third objective of the study was aimed at determining recommendations for enhancing fire incidence preparedness which Ndola Municipal Council can employ to improve its service delivery. The table below shows the responses given by the respondents:

Table 4.12: Recommendations for enhancing fire incidence preparedness

Recommendation	Frequency (f)	Percentage (%)
Improve Road Infrastructure	22	73.3
Increase Water Supply for Firefighting	26	86.7
Enhance Communication Systems	20	66.7
Establish More Fire Stations	18	60
Expedite Approval of Fire Equipment Requests	15	50
Reduce Political Interference	12	40
Provide Sufficient Fire Equipment	24	80

Source: Field Data (2025)

As shown in the table, 22 (73.3%) said improve road infrastructure increase, 26 (86.7%) said water supply for firefighting, 20 (66.7%) said enhance communication systems, 18 (60%) said establish more fire stations, 15 (50 %) said expedite approval of fire equipment requests, 12 (40%) said reduce political interference and 24 (80%) said provide sufficient fire equipment. One respondent (P1) emphasized the need for better roads to support firefighting efforts, stating,

"The road network is one of our biggest challenges when responding to fires. Fire trucks often struggle to reach the scene on time because the roads are in poor condition, especially in rural areas. It's crucial that the government invests in improving these roads so that we can reach emergency situations quickly and prevent further damage."

Another respondent (P3) echoed this concern, adding,

"Better roads would make a world of difference. We need to ensure fire trucks can get to any area, no matter the weather or road conditions."

A respondent (P5) pointed out the importance of securing a reliable water supply for firefighting, explaining,

"In many areas, the lack of access to water is a serious issue. During large fires, we often find ourselves running out of water, which leaves us unable to fight the blaze effectively. Increasing the water supply for firefighting efforts is essential for us to respond quickly and successfully."

Another respondent (P7) added,

"The council should prioritize improving water access in fire-prone areas to ensure we can tackle fires head-on with the resources we need."

Improved communication was another key recommendation from respondents. One person (P11) shared,

"Communication is critical in managing fire emergencies. Right now, there are too many delays in relaying information, which causes confusion and delays in response times. I recommend investing in better communication systems that allow us to respond faster and more effectively."

Another respondent (P13) stressed,

"We need a more streamlined and reliable way to communicate during emergencies. Clear communication can save lives, and the current system just isn't efficient enough."

The need for more fire stations across the municipality was highlighted by one respondent (P20), who stated,

"There aren't enough fire stations to cover all areas adequately. Some parts of the city are too far from the nearest station, which means firefighters can't respond quickly. Setting up more stations would significantly reduce response times and help us save more lives and property."

Another respondent (P22) emphasized,

"A well-distributed network of fire stations would help improve our coverage and ensure that we can respond to any emergency promptly, no matter where it occurs."

A respondent (P29) expressed frustration with the lack of sufficient firefighting equipment, stating,

"We often find ourselves using outdated or malfunctioning equipment, which slows down our response. It's critical that the council invests in modern, fully operational fire trucks and tools. Without the right equipment, it's impossible to fight fires effectively, and lives and property are at risk."

Another respondent (P23) added,

"Providing sufficient and up-to-date fire equipment is non-negotiable. We need to be ready for any situation, and that can only happen if we have the proper resources at our disposal."

4.6 Summary of the Chapter

This chapter has presented the findings of the study based on the three objectives. Data was presented through tables, charts and direct quotations from respondents. The findings were gathered from questionnaires and interviews. The next chapter will discuss the findings of the study.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.0 Introduction

The findings from the previous chapter are discussed in this section of the study. It gives specifics about the themes that were briefly discussed. The presentation of the debate aligns with the study's objectives. The objectives of the study were to: (i) Assess the current level of fire incidence preparedness by Kabwe Municipal Council in the central business district and local community; (ii) Identify the challenges and limitations faced by Kabwe Municipal Council in implementing fire safety measures and; (iii) Propose recommendations for enhancing fire incidence preparedness in Kabwe central business district.

5.1 The current level of fire incidence preparedness by Kabwe Municipal Council

Current Level of Preparedness

The study found that only 16.7% of respondents considered Kabwe Municipal Council to be "very prepared" for fire incidences, while 40% deemed it "moderately prepared," and 26.7% were unsure. A further 16.7% indicated that the council was "not prepared." Respondents who expressed confidence cited the availability of structured training programs and functional equipment. This reflects the importance of consistent drills and equipment maintenance, as highlighted by Haddow et al. (2021), who argue that preparedness is directly linked to operational readiness and workforce confidence. However, those identifying as "moderately prepared" or "not prepared" pointed to slow response times, inadequate coordination, and insufficient resources. These findings align with Quarantelli's (2019) assertion that disaster preparedness requires more than infrastructure; it demands integrated systems and clear protocols.

From a Protection Motivation Theory perspective, this confidence reflects high levels of self-efficacy, where individuals believe in their ability to mitigate risks effectively. However, the significant proportion of respondents who rated preparedness as moderate or poor reflects perceived barriers, such as insufficient coordination and slow

response times. These findings align with Haddow et al. (2021), who emphasize that perceived resource limitations undermine self-efficacy and response efficacy in disaster management. In this regard, Kabwe Municipal Council demonstrates some level of preparedness, but systemic challenges, including coordination and resource allocation, need urgent attention to achieve comprehensive readiness.

The study also identified several fire safety measures provided by the council. Notably, fire extinguisher distribution, public awareness campaigns, and emergency contact and rapid response systems. However, measures like regular equipment maintenance and evacuation plans for public spaces were less emphasized. The heavy reliance on rapid response mechanisms reflects an operational focus but neglects preventive measures. According to Bryant and Hall (2017), fire preparedness should strike a balance between prevention and response. Public awareness campaigns, for instance, are critical in fostering a "prevention culture" among communities. Nonetheless, limited focus on equipment maintenance and evacuation planning represents a gap, as poorly maintained resources and lack of preparedness for public spaces increase vulnerabilities during emergencies (Smith & Smith, 2019).

Protection Motivation Theory highlights the role of threat appraisal, how individuals assess the severity and likelihood of risks. Public awareness campaigns increase perceived severity and susceptibility to fire risks, encouraging adaptive behaviors. However, limited attention to preventive measures like equipment maintenance and evacuation planning suggests low perceptions of response efficacy. Bryant and Hall (2017) argue that balanced preparedness requires both preventive and responsive strategies to enhance self-efficacy and reduce maladaptive responses. While the council has made significant strides in fire safety measures, there is less emphasis on preventive strategies, such as regular equipment maintenance and evacuation drills, which is needed to enhance overall preparedness.

The availability of firefighting equipment is another critical aspect of preparedness. The study revealed that Kabwe Municipal Council possesses basic resources, including

eight fire extinguishers, two fire trucks, and twelve smoke detectors. Despite the presence of hydrants, many are non-functional, as repairs by the Lukanga Water and Sanitation Company remain inadequate. The limited availability and functionality of firefighting equipment present significant risks. Cannon and Schmidlein (2019) emphasize that firefighting resources should not only meet minimum thresholds but also account for population growth and urban development. The council's reliance on two fire trucks—one for active operations and one for training—limits its ability to handle simultaneous incidents. Additionally, maintenance lapses exacerbate these challenges, aligning with Perry and Lindell's (2023) argument that resource inadequacies compromise response efficacy during emergencies.

In the Protection Motivation Theory framework, resource limitations negatively impact self-efficacy and response efficacy. Cannon and Schmidlein (2019) argue that adequate resources are vital for fostering confidence in emergency response capabilities. The council's reliance on two fire trucks, one for active operations and one for training limits its capacity to handle simultaneous incidents, further diminishing perceptions of preparedness. In this regard, the council's firefighting capacity is hindered by insufficient equipment and maintenance issues. Addressing these gaps is crucial for enhancing fire response capabilities.

The study also found that the council provides various training programs, including basic firefighting techniques, equipment use and maintenance, and advanced fire response. Regular drills are conducted quarterly. While these efforts are commendable, gaps in advanced training and disaster risk management remain significant. Advanced training is critical for handling complex emergencies, especially in urban areas where fire risks are amplified by infrastructure and population density. Alexander (2022) highlights that comprehensive training programs must integrate technical, tactical, and risk management components. Furthermore, regular mock drills, though beneficial, should simulate a broader range of scenarios to prepare personnel for high-stress, unpredictable situations (Lindell et al., 2024).

Protection Motivation Theory highlights the importance of coping appraisal evaluating the efficacy of protective actions and the individual's ability to perform them. Regular training and drills enhance self-efficacy, as personnel gain confidence in their ability to respond to emergencies. However, gaps in advanced training indicate limited perceptions of response efficacy for complex scenarios. Alexander (2022) emphasizes that comprehensive training programs must include advanced techniques to address a wide range of risks effectively. In this regard, lack of expanding the scope of training programs, particularly in advanced fire response and disaster risk management, has less equipped personnel to handle diverse emergency scenarios.

The study found that the council employs a variety of communication channels, including radio programs, roadshows, print media, emergency hotlines, and public signals. These methods ensure broad outreach and accessibility. However, challenges such as limited awareness of hotlines and resource constraints for roadshows were identified. Effective communication is a cornerstone of fire preparedness. Drabek and McEntire (2023) stress the importance of multi-channel communication to reach diverse audiences. Kabwe Municipal Council's integration of traditional and modern methods is commendable, but there is room for improvement in promoting these tools and ensuring community engagement. For instance, roadshows could be made more frequent and participatory to enhance public awareness.

Effective communication aligns with Protection Motivation Theory's focus on threat appraisal. Public awareness campaigns increase perceptions of severity and susceptibility, motivating adaptive behaviors. Drabek and McEntire (2023) emphasize the importance of multi-channel communication to ensure inclusivity. However, the limited reach of some methods, such as roadshows, reflects perceived barriers that undermine protective responses. In this regard, lack of strengthening community engagement and promoting the use of communication tools has compromised fire reporting and prevention efforts.

5.2 The challenges and limitations faced in implementing fire safety measures

One of the most pressing issues identified in the study is the poor road network, with 66.7% of respondents highlighting this as a major limitation. Fire trucks often struggle to navigate poorly maintained roads, especially in rural areas. This delay can be catastrophic, as fires rapidly escalate within minutes. Respondents emphasized that by the time fire trucks reach the scene, the damage is often irreparable. This finding aligns with studies of Perry & Lindell (2023) who stressed that efficient road networks are integral to timely responses in fire emergencies. Through the lens of Protection Motivation Theory, poor road networks increase the perceived severity and vulnerability of the community to fire related disasters. The delay in emergency response time exacerbates the threat appraisal component of Protection Motivation Theory, as individuals recognize the high likelihood of harm. In this regard, due to lack of adequate infrastructure, the effectiveness of even the well-equipped fire brigades is compromised.

A staggering 83.3% of respondents identified limited water supply as a critical challenge. Firefighting is inherently dependent on water availability, and shortages severely impede the ability to contain fires. Respondents described scenarios where fires could not be managed due to insufficient water, forcing reliance on scarce fire hydrants. This issue is not unique to Kabwe. Studies by Smith & Smith (2019) highlight that water scarcity is a global challenge, particularly in developing regions where infrastructure for water storage and distribution is inadequate. Under Protection Motivation Theory, the lack of water supply heightens the perceived severity and vulnerability of fire hazards, as individuals realize the limited capacity to combat fires. This scenario lowers coping appraisal, as people may feel there is little they can do to effectively respond to fire emergencies. In this regard, lack of investments in water resource management and ensuring firefighting systems have lowered access to reliable water supplies.

Effective communication is essential during fire emergencies. However, 60% of respondents indicated that communication issues are a persistent problem. Delays in relaying critical information, unclear instructions, and a lack of coordination between fire

brigades and other emergency services exacerbate the situation. Research by Bryant & Hall (2017) corroborates this finding, emphasizing the need for integrated communication systems in emergency management. In many cases, delays in communication result from outdated technologies and a lack of training in crisis management protocols. Protection Motivation Theory highlights how delayed communication increases threat appraisal, as individuals become more aware of the risks posed by a lack of coordination. This gap in communication reduces coping appraisal, as people may doubt the ability of fire services to respond effectively. In this regard, outdated communication tools and training programs have significantly lowered response times and coordination.

Half of the respondents (50%) cited the lack of fire stations as a major limitation. The sparse distribution of fire stations across Kabwe makes it challenging to respond to emergencies promptly. Respondents pointed out that in some areas, fire stations are located far from affected sites, leading to delays. This challenge is echoed in urban planning studies, which emphasize the importance of strategically placed fire stations to minimize response times (Drabek & McEntire, 2023). The lack of fire stations amplifies the perceived severity and vulnerability of fire-related disasters under Protection Motivation Theory. Communities that are far from fire stations are more likely to feel helpless in the face of emergencies. In this regard, lack of sufficient fire stations has led to poor fire safety.

Delays in approving requests for resources or support were highlighted by 40% of respondents. These bureaucratic hurdles slow down the implementation of fire safety measures and emergency responses. Participants expressed frustration with the time it takes to secure necessary approvals during critical moments. Such delays can be life-threatening, as they prevent timely interventions. Other studies have similarly identified bureaucratic inefficiencies as a barrier to effective disaster management. Perry & Lindell (2023) advocate for streamlined decision-making processes to reduce delays and enhance the responsiveness of fire brigades. From a Protection Motivation Theory perspective, bureaucratic delays heighten the perceived severity of fire emergencies

due to the extended time taken for responses. These delays undermine coping appraisal, as individuals may perceive the system as inefficient and untrustworthy. In this regard lack of streamlining decision-making processes has boosted this perception and built less confidence in fire safety measures.

Political interference, cited by 33.3% of respondents, further complicates the implementation of fire safety measures. Political agendas often disrupt resource allocation and decision-making processes, prioritizing interests that may not align with public safety. This finding is consistent with studies of Adusei (2018) who highlights the detrimental impact of political influence on disaster management. Under Protection Motivation Theory, political interference can increase threat appraisal, as individuals recognize the systemic barriers to effective fire safety implementation. This perception lowers coping appraisal, as people may feel powerless to advocate for change. In this regard, lack of transparency and accountability in governance have resulted in poor implementation of fire safety measures effectively and without bias.

A significant concern for 73.3% of respondents was the lack of adequate firefighting equipment. Outdated fire trucks and equipment in poor condition severely limit the fire brigade's capacity to handle emergencies. Research by Chowdhury (2020) underscores the importance of modern firefighting tools in managing large-scale emergencies. The absence of sufficient fire equipment significantly raises threat appraisal under Protection Motivation Theory. Communities become more aware of their vulnerability to large-scale fires, and confidence in mitigation efforts decreases. In this regard, lack of investments in advanced equipment and regular maintenance has resulted in lack of efficiency by fire brigades.

5.3 Recommendations for enhancing fire incidence preparedness

A significant concern raised by respondents was the poor condition of roads, particularly in rural areas, which causes delays in firefighting responses. The difficulty in accessing

fire-prone areas quickly hinders the timely arrival of fire trucks and other emergency services. It was recommended that investments be made in improving road infrastructure, particularly in rural and remote areas, to ensure faster access to fire scenes. This would contribute to quicker and more effective firefighting responses. Research by Drabek & McEntire (2023) demonstrated that inadequate road infrastructure hampers firefighting efforts, particularly in rural areas. In PMT, the perceived severity and vulnerability of a threat influence protective behaviors. In the context of firefighting, poor road infrastructure increases the perceived vulnerability of a community to fire-related harm because of delays in firefighting response. Improving roads reduces this vulnerability and enhances the perceived ability to cope with fires effectively. By ensuring faster access to fire scenes, individuals and communities would feel more confident in their ability to handle the threat, which is a key component of PMT's response efficacy. This finding corresponds with the study's recommendation to improve roads for faster fire response.

Water access is a crucial element in effective firefighting, but many fire-prone areas lack reliable water sources. Respondents highlighted that inadequate water supply is one of the key challenges faced during fire emergencies. To address this issue, the study suggests enhancing the availability of water by establishing strategically placed water reservoirs and improving water infrastructure in high-risk areas. By doing so, the firefighting process can be more efficient and less dependent on external water sources during emergencies. Cannon & Schmidlein (2019) emphasized the importance of strategically located water reservoirs in urban and rural areas. In PMT, individuals are more likely to engage in protective behaviors if they believe they have the resources to do so. The recommendation to increase water supply aligns with the concept of response efficacy, where the availability of adequate resources (in this case, water) enhances confidence in dealing with the threat of fires. If communities perceive that they can fight fires more effectively due to reliable water sources, their motivation to protect themselves from fire damage increases, reinforcing the protective behavior. This aligns with the study's call for improved water access for firefighting.

A common issue faced during fire emergencies is the delay in communication, which hampers the flow of critical information. Modernized communication systems would significantly improve coordination between fire stations, emergency responders, and local authorities. Respondents emphasized the need for streamlined, efficient communication systems that can relay urgent information in real-time. Upgrading these systems would lead to better preparedness and faster action during emergencies. A report by Drabek & McEntire (2023) stressed the role of advanced communication technologies in improving emergency response times. PMT emphasizes the importance of clear communication in boosting an individual's confidence in their ability to cope with a threat. Effective communication systems improve self-efficacy—the belief in one's ability to manage an emergency effectively. By modernizing communication systems, responders can relay information faster, thus reducing the uncertainty associated with fire events. This enhances the community's belief in the effectiveness of their response strategies, increasing protective motivation during emergencies. The study's recommendation for modernizing communication systems supports this research.

The inadequate number of fire stations across the municipality contributes to slower response times, especially in areas far from existing stations. Respondents recommended the establishment of more fire stations, with a focus on locations that would improve coverage and reduce the time it takes for firefighters to reach emergency scenes. A well-distributed network of fire stations would enhance fire safety across the region and increase the overall efficiency of emergency response efforts. Haddow *et al.*, (2021) found that reducing the distance between fire stations and high-risk areas leads to better emergency outcomes. PMT suggests that the availability of protective resources, such as nearby fire stations, enhances perceived response efficacy. By ensuring that fire stations are well-distributed, the perceived vulnerability to fire hazards decreases, as the community believes that help will be available quickly. This increased access to firefighting resources empowers people to take protective actions and fosters a sense of safety, motivating them to be proactive in preventing fire damage. The study's call for more fire stations is in agreement with this scholarly perspective.

One of the key barriers to effective fire response is the bureaucratic delay in acquiring essential firefighting equipment. Respondents noted that red tape and slow approval processes for purchasing equipment impede fire preparedness and hinder the timely deployment of resources. The study recommends that approval processes for fire equipment be expedited to ensure that firefighters have access to the necessary tools when needed most. Perry & Lindell (2023) highlighted that delays in procurement processes are common in public safety sectors, a challenge echoed by respondents in the study. PMT posits that the presence of adequate resources for protection plays a key role in motivating protective behaviors. Delays in acquiring fire equipment diminish self-efficacy and hinder the community's belief that they can effectively respond to fire threats. Expediting approval for essential firefighting equipment ensures that the necessary tools are available when needed, improving confidence in the ability to handle fires and reinforcing the motivation to engage in protective actions.

Political interference can obstruct the decision-making process, often leading to delays or misallocation of resources. Respondents stressed that minimizing political involvement in fire safety management would allow for more efficient and transparent decision-making. Reducing political interference would enhance the overall effectiveness of fire management strategies, ensuring that resources are allocated based on need and urgency. Quarantelli (2019) found that political interference can disrupt effective resource allocation in fire safety. According to PMT, the ability to cope with a threat is enhanced when external factors, such as political interference, are minimized. Political interference can undermine response efficacy by delaying resource allocation or decision-making processes. Reducing political influence ensures that firefighting resources are distributed efficiently and based on need, allowing communities to respond more effectively to fires. When individuals perceive that decision-making is not obstructed, their motivation to engage in protective behaviors increases, as they trust that the necessary support will be provided. The study's recommendation to reduce political influence reflects this concern.

The provision of modern and operational firefighting equipment is vital to handling emergencies effectively. Respondents highlighted that outdated or insufficient fire equipment often limits the effectiveness of firefighting efforts. The study recommends that adequate, state-of-the-art firefighting tools and equipment be made available to ensure that responders can handle a wide range of fire emergencies competently. Smith & Smith (2019) emphasized the importance of modern equipment in successful firefighting. A core element of PMT is the belief that one has the ability to cope with a threat. Providing modern, operational fire equipment directly enhances self-efficacy, empowering fire responders to deal with fires more effectively. When responders have the right tools, they perceive their ability to protect the community as stronger, which in turn motivates them to act swiftly and efficiently. This increases the overall protective motivation of both responders and the community, ensuring a more effective firefighting effort and greater safety. The study's recommendation to provide up-to-date firefighting tools is in line with these findings.

5.4 Summary of the Chapter

This chapter discussed data collected and presented in chapter four. This was done by analyzing data and comparing it with findings of other scholars, and further make conclusions. The general findings revealed that the fire incident preparedness of Kabwe Municipal Council exhibits both areas of strength and room for development. The council deserves praise for its efforts in emergency response plans, training, and public awareness initiatives. But there are still a lot of problems, such lack of resources, upkeep problems, and advanced training shortages. It is clear from the Protection Motivation Theory that preparedness efforts are significantly shaped by perceptions of severity, vulnerability, reaction efficacy, and self-efficacy. The next chapter makes conclusions and recommendations.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter presents the study's findings and offers recommendations to different stakeholders regarding what could be changed or improved. The objectives of the study are closely linked to the conclusions.

6.2 Conclusion

This research was intended to determine fire incidence preparedness by Kabwe Municipal Council. The study concludes that Kabwe Municipal Council's fire incidence preparedness reflects a mix of strengths and areas for improvement. The council has made commendable efforts in public awareness campaigns, training, and emergency response mechanisms. However, challenges such as resource constraints, maintenance issues, and gaps in advanced training remain significant. Through the lens of Protection Motivation Theory, it is evident that perceptions of severity, susceptibility, response efficacy, and self-efficacy play a critical role in shaping preparedness efforts.

The study also concludes that Kabwe Municipal Council highlights the multifaceted challenges and limitations in implementing fire safety measures. Poor road networks, limited water supply, communication issues, and a lack of fire stations are significant infrastructural and organizational barriers. Bureaucratic delays, political interference, and insufficient equipment further exacerbate these challenges.

The study further concludes that fire incidence preparedness by Kabwe Municipal Council can be improved in a number of ways. Some of the ways include improving resources, enhancing training, and expanding communication strategies will foster adaptive behaviors and comprehensive fire preparedness. Addressing them requires a holistic approach that includes investments in infrastructure, modern equipment, and training. Strengthening communication systems and reducing political and bureaucratic interference are equally critical. Finally, public education campaigns can enhance

community preparedness and reduce preventable fire incidents. By tackling these challenges comprehensively, municipalities can significantly improve fire safety and protect lives and property.

6.3 Recommendations

Based on the findings, the study makes the following recommendations:

- i. Existing water hydrant systems should be regularly inspected, repaired, and maintained. Lukanga Water and Sanitation Company should be actively engaged to conduct periodic servicing and ensure full functionality of hydrants, especially in the CBD where fire hydrants are currently underutilized due to poor maintenance.
- ii. Local authorities should prioritize funding for the construction and maintenance of durable, all-weather roads in areas that are difficult to access during the wet season, including Katondo, Makululu, and Ngungu compounds. These roads should facilitate the swift movement of emergency vehicles throughout the year.
- iii. Community wide fire safety awareness initiatives should be implemented, including public workshops, media campaigns, and educational outreach in schools and workplaces. These initiatives should educate residents on preventive measures, emergency response procedures, and how to promptly report fire incidents.
- iv. Firefighting tools and equipment should be upgraded, including the acquisition of portable fire extinguishers, high-pressure hoses, and advanced protective gear for firefighters. Increasing the stock of essential equipment would minimize delays caused by equipment shortages.

- v. Investment in modern communication systems and dispatch technology should be prioritized to enhance coordination during emergencies, ensuring that resources are deployed efficiently.

- vi. Fire awareness campaigns should involve partnerships with local NGOs, schools, community organizations, and media outlets to educate the public on fire prevention and response. Volunteer firefighter programs should also be created to train community members in basic firefighting and emergency evacuation skills.

- vii. The municipality should establish mutual aid agreements with neighboring districts and regional fire services to facilitate resource sharing during large-scale emergencies. These agreements should cover manpower, fire trucks, and specialized equipment to handle complex incidents effectively.

6.4 Recommendations for further research

While the current study highlights gaps in advanced fire response training, further research could assess the long term impact of specialized training programs on fire personnel's performance. This could include evaluating how advanced simulations, disaster risk management modules, and international best practices influence response efficacy and self-efficacy.

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APPENDICES

Appendix I: INTERVIEW GUIDE FOR THE CHIEF FIRE OFFICER/FIRE OFFICERS

Investigating Fire Incidence Preparedness by Kabwe Municipal Council: A Case Study of Kabwe District

Interviewer: _____ Name of Fire Station: _____.

Date: _____ Place: _____

Start Time: _____

All information provided in this study will be treated as confidential and your anonymity is assured.

1. State the department you are working
2. How many years have you been at post?
 - a) 0 – 1
 - b) 1 – 3
 - c) 3 - 5
 - d) 5 - 10

Assessing Current Level of Fire Incidence Preparedness by Kabwe Municipal Council

3. What is the current number of Fire Fighting Officers at Kabwe Municipal Council Fire Brigade section?

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4. Is the current number mentioned above sufficient to handle a major fire incidence in Kabwe district?

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5. What specific fire safety procedures/measures are currently in place within Kabwe Municipal Council?

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6. How often does Kabwe Municipal Council conduct fire drills and training for its employees?

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7. Has the fire training conducted previously contributed positively to the fire incidence preparedness of Kabwe Municipal Council?

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8. How often does Kabwe Municipal Council conduct sensitizations on fire incidence preparedness to the Central Business District and local community?

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9. What types of fire-fighting equipment are available in Kabwe district?

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10. Is the firefighting equipment mentioned above reliable for major fire disasters within Kabwe Central Business district and the local community?

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11. How often are the firefighting equipment serviced or replaced?

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12. Have you ever experienced a breakdown in your fire equipment which lead to the failure by the section to put down a fire?

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13. Are the water points within the district enough to aid the fire section in quenching off fire in case the fire engine run out of water?

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14. How does Kabwe Municipal Council communicate fire safety information to businesses and residents within the district?

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15. How does the public communicate with Fire Brigade section in case of a fire breakout?

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16. How is the budget process for fire brigade section implemented?

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17. Does the fire brigade section have a reserve account to be used in case of an emergency?

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18. (i). Are there any partnerships or collaborations between Kabwe Municipal Council and other organizations to help strengthen the fire safety preparedness?

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(ii).If yes to question “18 (i)”, what are the names of these organizations?

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(iii).How have these organizations contributed positively to the fire incidence preparedness of Kabwe Municipal Council?

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Identifying Challenges and Limitations

19. What are the main financial constraints faced by Kabwe Municipal Council in implementing fire safety measures?

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20. What logistical challenges does the Council encounter in maintaining and upgrading fire-fighting equipment?

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21. Are there any regulatory or legal barriers that limit the Council's ability to enforce fire safety measures?

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22. What challenges does Kabwe Municipal Council face in coordinating with local Businesses and local residents for effective fire safety planning?

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Proposing Recommendations

23. What strategies could be implemented to improve the funding and resource allocation for fire safety measures?

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24. How can Kabwe Municipal Council enhance training programs to ensure better preparedness among its staff and the community?

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25. What role can technology play in improving fire incidence detection and response in Kabwe district?

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26. How can the Council foster stronger partnerships with private sector entities to support fire safety measures?

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27. What policy changes or new regulations could be introduced to strengthen fire safety enforcement and compliance?

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End time.....

Thank you for your time and participation.

Appendix II: QUESTIONNAIRE FOR BUSINESS OWNERS AND LOCAL RESIDENTS

UNIVERSITY OF LUSAKA



Dear Respondent,

I am a final year student studying Master of Arts of Public Administration at the University of Lusaka. I am writing my final year thesis which is based on “Fire incidence preparedness by Kabwe Municipal Council; a case study of Kabwe district. You have been selected among a few respondents to help complete my research by answering the following questions. You are assured that any information you provide is exclusively meant for the research and nothing else. Your response to the questions will be kept confidential.

Section 1: Demographics

1. Gender:

a) Male

b) Female

2. Marital status:

a) Single

b) Married

c) Divorced

d) Separated

e) Widowed

3. Educational level:

- a) No schooling
- b) Primary education
- c) Secondary education
- d) Tertiary

4. What is your age?

- a) Under 18
- b). 18-35
- c). 36-50
- c). 51 and above

1. What is your role in the community?

- a). Business owner
- b).Local resident

2. How long have you been operating your business/living in this area?

- a). Less than 1 year
- b). 1-3 years
- c). More than 3 years

Fire Awareness and Preparedness

3. How aware are you of fire safety procedures for your home/business?

- a). Very aware
- b). Somewhat aware
- c). Not aware

4. Have you received any fire safety training in the past year?

- a). Yes
- b). No

Fire Safety Measures

5. Do you have fire extinguishers installed in your home/business?

- a). Yes
- b). No

6. How often do you maintain your fire extinguishers?

- a). Monthly
- b). Every 6 months
- c). Yearly
- d). Never

Past Experiences with Fire Incidents

7. Have you experienced a fire incident in the past 5 years?

- a). Yes
- b). No

8. If yes, what was the main challenge you faced during the fire?

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Perception of Fire Response Services

10. How would you rate the effectiveness of Kabwe Municipal Council’s fire department’s response?

- a). Excellent
- b). Good
- c). Average
- d). Poor

11. How confident are you that the Kabwe Municipal Council can handle a fire emergency in your area?

- a). Very confident
- b). Confident
- c). Not confident
- d). Not at all confident

Engagement and recommendation

12. Would you be willing to participate in fire safety training or drills in the future?

- a). Yes
- b). No
- c). Maybe

13. What would you suggest to improve fire preparedness in your community?

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Thank you for your time and participation.

Appendix III: SUBMISSION CHECKLIST



SCHOOL OF POSTGRADUATE STUDIES

1ST TO 20TH JANUARY 2025 GBS800 DISSERTATION SUBMISSION

No	Item	Done
1	Were you registered for GBS800 in the JUL-DEC 2024 semester?	Done
2	Has your FINAL DISSERTATION been signed by your supervisor ¹ ?	Done
3	Have you attached the plagiarism similarity report to the appendix?	Done
4	Is your plagiarism similarity report below 20 percent together with the AI generated? Please append the similarity report to your dissertation.	Yes
5	Have you submitted a soft copy version of your dissertation to the UNIVERSITY CLASS called "GBS 800 FINAL SUBMISSIONS- 12 TH -20 TH JAN 2025?" See point (3) on the next page for more details.	Done
6	What is your dissertation's total word count (including references and appendices)?	15, 874 WORDS
	Candidate Name: Mwanida Banda	
	Student Number: MPA23119818	
	Signature: 	
	Date: 20/03/2025	

¹ Please ensure that the "SUBMISSION OF DISSERTATION FOR EXAMINATION FORM" (available on page 43 of the dissertation guidelines) is printed and signed by your supervisor and included as part of your submission.

EACH STUDENT MUST ATTACH THE FOLLOWING SIGNED CHECKLIST AS PART OF THEIR DISSERTATION SUBMISSION.

A STUDENT WHO DOES NOT MEET ALL REQUIREMENTS LISTED IN THE CHECKLIST ABOVE MAY NOT BE READY FOR SUBMISSION AND MAY HAVE TO RE-REGISTER FOR GBS800 IN THE FIRST SEMESTER OF 2025.

DETAILS REGARDING EACH ITEM ON THE CHECKLIST

No	Item
1	If you were not registered for GBS 800 for the period JUL-DEC 2024 you must do so otherwise you risk: <ul style="list-style-type: none">• Not being scheduled for dissertation defense• Not receiving communication• Not receiving your GBS800 results• Not meeting graduation criteria
2	If supervisor can't sign off the hard copy dissertation, approval for submission can be submitted by either: <ul style="list-style-type: none">• Appending an electronic signature in the dissertation, or• Sending consent via email to abby.nakalinda@unilus.ac.zm or jmwewa@unilus.ac.zm (copying the student) the email must then be printed and included as part of the submission.
3	GBS 800 FINAL SUBMISSIONS- 12TH -20TH JAN 2025
4	Ensure your word count is as per University requirement (i.e. 15,000-20,000 words).
5	If anything is unclear, email the GBS800 coordinator or postgraduate office.