

NAMIBIA-ANGOLA BORDERLINE INFRASTRUCTURE AND ITS
IMPLICATIONS ON NATIONAL SECURITY

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS IN SECURITY AND STRATEGIC STUDIES
OF THE UNIVERSITY OF NAMIBIA

BY

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OCTOBER 2025

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ABSTRACT

The study assessed the effectiveness of current border management strategies and examined their impact on national security, using the border between Namibia and Angola as a case study. Media reports have indicated that the borderline between Namibia and Angola lacked structural integrity, road access, surveillance, and effective border management frameworks. The objectives of the research were to analyse the frequency of illegal crossings and the smuggling of illicit goods between Namibia and Angola. The study also assessed the potential threats to national security posed by the current security infrastructure along the borders. The study used quantitative research methodology by means of a survey design. Data was collected from a sample of 145 respondents using stratified random sampling. The results were analysed employing descriptive and inferential statistics with the aid of the Statistical Package for Social Sciences. The findings revealed that multiple challenges hinder effective border security management, including difficult terrain and limited resources for surveillance and patrols. It resulted in high levels of unauthorised border crossings and illicit trafficking of goods along the borders, which has affected national security. No significant differences were found between agencies regarding borderline fortification inadequacies. The findings further showed a significant positive correlation with national security perceptions, thus emphasising the need for modernisation. Based on the findings, the study recommended the overwhelming support for technology adoption, interagency coordination, establishment of the integrated one-stop border posts, and custom reinforcements based on ground intelligence, with the involvement of the communities.

Keywords: security infrastructure, structural integrity, border security management, modernisation

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List of abbreviations and acronyms

AU	African Union
ANOVA	Analysis of Variance
CBP	Customs and Border Protection
CCTV	Closed-Circuit Television
COMPUTE	Command in statistical software
df	Degrees of freedom
EFA	Exploratory Factor Analysis
EU	European Union
HSD	Honestly Significant Difference
IBM	Integrated Border Management
IBMS	Integrated Border Management System
IFRC	International Federation of Red Cross and Red Crescent Societies
MEAN	Function in statistical software
MHAISS	Ministry of Home Affairs, Immigration, Safety and Security
NAMPOL	Namibian Police Force

r	Correlation coefficient
SPSS	Statistical Package for the Social Sciences
Sig.	Significance
Std.	Standard
UN	United Nations
UNODC	United Nations Office on Drugs and Crime
USCBP	United Nations Customs and Border Protection

Acknowledgements

I would like to thank my main supervisor, Dr Nicasius A. Check from the Human Sciences Research Council in South Africa for his support during the research process of this study.

I am also deeply grateful to my co-supervisor, Mr John S. Anghuwo, from the University of Namibia, for his insightful guidance and unwavering support. His proficiency in the field significantly shaped this thesis and ensured its academic rigor.

Furthermore, I extend my appreciation to the management of the Ministry of Defence and Veterans Affairs for their generous financial support, which made this research possible.

Finally, I would like to acknowledge my fellow students and staff at the School of Military Science for their unwavering guidance and moral support throughout my studies.

Dedication

This thesis is dedicated to the cherished memory of Hafeni Tuli Shigwedha.

Declaration

I, **Hileni Amadhila**, hereby declare that this is my own work and is a true reflection of my own research and that this work, or any part thereof has not been submitted for a degree at any other institution.

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Signature



Date: October 2025

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter establishes the foundational context and premises for analysing the border security infrastructure between Namibia and Angola and its implications for national security. It commences by orienting the reader to the study's scope, articulating the research problem, objectives, hypotheses and overarching aims. The significance and rationale underpinning the inquiry are delineated, underscoring its potential theoretical, practical and policy contributions. Key terminologies are defined to ensure conceptual clarity. Furthermore, the chapter forthrightly acknowledges the study's limitations and delimitations, thereby demonstrating transparency regarding its boundaries.

1.2 Background to the study

The border is characterised by physical and symbolic boundaries between countries (Adesina, 2019). In this context, borders are critical instruments that are shaped by political, social, economic and cultural interactions. Mostly, borders are also associated with lack of control due to infrastructure deficiency, communication system and comprehensive Border Management Framework Initiatives that enhance security cooperation and facilitate sustainable development.

These deficiencies leads to increased vulnerabilities and facilitating illicit activities such as smuggling, human trafficking and cross border crimes. Both the United Nations (UN) and African Union (AU) advocate for comprehensive border management framework and emphasises the need for peaceful border systems that bolster security, economic growth and social cohesion among member states (Allan & Labib, 2024). Hence, securing of the borders are prerequisite for national security.

According to Raimondo (2024), border security management in countries that are members of the United Nations (UN) and European Union (EU) involve multifaceted approach that integrates technology, policy and international cooperation for effectively protection of national borders as well as addressing cross-border threats like illegal migration, drug trafficking, and terrorism by using the concept of Integrated Border Management (IBM) system. The initiation of concept IBM was to address the management of the external borders of the EU member states as well as aims to develop regionally and globally recognised standards for coordination and cooperation among all relevant authorities involved in border security (Wagner, 2022). Additionally, most countries in Europe and in the Middle East utilise the combination of advanced surveillance systems such as drones and biometrics as well as physical manning which referring to human beings to monitor and control border crossings. Furthermore, a multifaceted strategy, encompassing physical infrastructure, technological deployment, and human resources, is utilised in U.S.-Mexico border security for mitigating illicit cross-border activities (Chambers, Boyce, Launius, & Dinsmore, 2021).

In African context, border management refers to the practice of controlling and regulating movements across national borders often complicated by poorly defined colonial-era boundaries which leading to challenges like cross-border crime, illegal migration, and conflict over natural resources. A significant proportion of African states have pursued the implementation of Integrated Border Management (IBM) systems, aiming to enhance security, trade facilitation and migration management (Kasura, 2021). This approach emphasizes a coordinated and efficient border control pattern through the integration of various agencies, technology and regional cooperative frameworks. Nevertheless, infrastructural deficits and financial

constraints have impeded the adoption and implementation of IBM across the continent. However, countries like Rwanda and Tanzania have implemented the IBM system along their shared border (Mpakaniye, 2021). The system includes the use of modern technology such as biometric scanners and surveillance cameras as well as human resources to monitor border activities and prevent illegal crossings. This system has led to a reduction in the smuggling of illicit goods and other illegal activities along the Rwanda-Tanzania border.

Namibia and Angola share a common border that extends for 1376 kilometres in the north (Info Namibia, n.d.). There have been numerous reports highlighting security challenges along the Namibia and Angola border (de Klerk, 2021). Specifically, de Klerk emphasises the presence of illegal migrants as well as the trafficking of goods and humans into Namibia through the shared borders with Angola. The borderline lacks durable security infrastructure, thus rendering it susceptible to contraband trafficking and organised crime (Ashipala, 2021; Nembwaya, 2021). Adding to Namibia's concerns about illegal immigration, trafficking and organised crime is the influx of undocumented cheaper labour entering Namibia through illegal entry points (International Federation of Red Cross and Red Crescent Societies [IFRC], 2021).

Namibia also borders Zambia to the northeast (233 km), Botswana to the east (1,360 km), South Africa to the southeast and south (855 km) and the Atlantic Ocean to the west (1,572 km); (Info Namibia, n.d.). The border infrastructures between South Africa-Namibia and Botswana-Namibia are secured with stock-proof fences (Handmaker & Nalule, 2021). The border between Namibia and Angola extends from Kunene in the west to the Kavango (Cuando) River in the east. This border traverses five regions: Omusati, Ohangwena, Kunene, Kavango East, Kavango West and Zambezi (Bolliger, 2023). The demarcation of this border consists of a cleared strip of

land that runs through bushes and savannah, with some areas marked by a wire attached to wooden poles (Bolliger, 2023). However, both Namibia and Angola navigate the complexities of the shared borders and understand the implications of infrastructure deficiencies on national security.

In an attempt to advance its security measures, Namibia has gazetted seven land border posts designated as ports of entry/exit, namely Ruacana, Omahenene, Omuvelo waKashamane, Oshikango, Nkurenkuru, Katwitwi and Sarusungu to curb the influx of people and prevent the smuggling of illicit goods (Government Gazette, 2020). Moreover, there have been challenges of long distances between the official border crossing points that are located far apart. As a result, residents of the two countries find it difficult to walk long distances to the nearest border crossing point in compliance with the immigration rules and regulations, which is a fact that is prompting the illegal border-crossings in and out of Namibia. Therefore, due to the lack of law enforcement officials or infrastructure to regulate entry and exit into and from Namibia, there have been instances of undocumented travel and the unauthorised movement of illegal goods. As a result, the focus of this study focused on border infrastructure and its implications on national security using Angola and Namibia boundaries as a case study.

1.3 Statement of the problem

The boundary between Namibia and Angola is characterised by lack of structural integrity, inadequate staffing at border posts, limited road access, insufficient surveillance systems and ineffective border management frameworks to enhance security cooperation and facilitate sustainable development for economic growth (Kambowe, 2017; The Villager, 2022). The vulnerabilities have created a security gap, which has resulted into a noticeable increase in illicit cross-border activities. These

activities encompass the smuggling of commodities such as fuel, alcohol, and cigarettes, among other goods, which exploit and worsen the price differences between the two countries. Concurrently, undocumented cross-border movement from Angola into Namibia is dominant, primarily driven by economic conditions, including the pursuit of employment and improve the living standards. Additionally, instances of stolen vehicle movement from Namibia into Angola have been documented. The situation also worsened by the porousness of borders. Consequently, the Namibian government has experienced a detrimental effect on revenue collection due to smuggling of illicit goods that are freely traded in the market. Moreover, the frequent illegal border crossings pose a major threat to national security since it could result in organised crimes in the form of money laundering, and terrorism act.

A recent report by the IFRC (2021) revealed that at the beginning of March 2021, around 894 Angolan migrants crossed into Namibia through illegal entry points in search of food, water, medical services and employment opportunities. Additionally, Shinana (2021) reported that law enforcement officials caught 623 migrants after illegal border crossing into Namibia and 863 Angolan nationals were deported after being arrested for illegal crossings. Furthermore, David (2021) reported that between January 2019 and April 2021, 45 vehicles were stolen in Ohangwena Region, of which eight were recovered in Angola. Despite numerous efforts by the Angolan and Namibian governments to curb illegal activities along the Angola-Namibia border, illicit activities persist. These incidents highlight the deficient border security infrastructure and insufficient control measures at designated ports of entry/exit points, which create a critical security gap along the Namibia-Angola border, resulting in illegal trade, rising crime rates and a direct threat to national security.

A previous study conducted by Nangulah and Nickanor (2005) mainly focused on legal border crossing and did not consider the condition of the structural integrity of the borderline between Namibia and Angola.

1.4 Objectives of the study

Main objective

To assess the effectiveness of the current border management strategies and address their impact on national security, using the borderline between Namibia and Angola.

Specific objectives

- To analyse the challenges of the borderline security infrastructures, the magnitude of illegal border crossings and smuggling of illicit goods between the Namibian and Angolan borders;
- To evaluate the extent of threat (s) that the current borderline's security infrastructure pose to national security in Namibia;
- To determine strategies of minimising illegal border activities between Namibia and Angola borders; and
- To conduct a comprehensive assessment of the current structural integrity of the Namibia and Angola border line and propose recommendations for improvement.

1.5 Hypothesis

H1: The Namibia and Angola borderline security infrastructure has had an impact on national security, which can be either positive or negative, in both countries.

H2: The effectiveness of the security infrastructure influenced by factors such as funding, personnel and technology.

1.6 Significance of the study

This study offers insights for the Ministry of Home Affairs, Immigration, Safety and Security (MHAISS), particularly the Namibian Police Force, to develop innovative strategies, prioritize resource allocation, and advance surveillance in high-risk border areas to combat cross-border crime. The study also provides recommendations for MHAISS and other border security agencies to enhance border management effectiveness. Equally, it contributes to the literature on security and strategic studies

1.7 Rationale of the study

The need for this study arose from the growing security challenges along the Namibia and Angola borderline. Despite efforts to enhance border security, cross-border crimes such as human trafficking, smuggling of illicit goods and terrorism continue to pose a threat to national security. The security infrastructure along the Namibia and Angola borderline has undergone significant development; however, limited research has been conducted to assess its effectiveness. This study, thus, sought to fill the knowledge gap and provide insights into the effectiveness of the security infrastructure in ensuring national security.

1.8 Limitations of the study

According to Leavy (2017) methodological selection of instruments employed for data collection, can influence the quality of research outcomes and the generalizability of the findings. This study was merely depending on questionnaires for data collection, which yielding limited information on border security issues along the Namibia-Angola border. Eventually, some participants had difficulty of understanding survey questions, leading to incomplete responses. However, the error was not realised at the start of the research process, only at the end. Another challenge was associated with survey administration due to staff shift work schedules at border post operations, which limited respondents' availability on time. Furthermore, this study was subject

to logistical constraints imposed by the researcher's full-time employment and the extensive geographical dispersion of the three different data collection sites (Oshikango, Omuvelo waKasamane and Ruacana Border Posts) which was a long-distance travel. These identified limitations were effectively mitigated through consultation and engagement with respective station commanders.

1.9 Delimitations of the study

Delimitations of the study refer to the boundaries or scope of the research (Leavy, 2017). The delimitation of this study was to focus on the Namibia and Angola borderline and its security infrastructure. The study did not cover other aspects of national security such as cybersecurity, economic security, or social security. Moreover, the study was limited to the analysis of security infrastructure and its impact on national security and did not examine the broader socio-political and economic factors that contribute to security challenges in the region.

1.10 Definition of Terminologies

Border: A line drawn across a nation to regulate and in certain situations, restrict the passage of individuals, products and services into a sovereign country's territory (Vusha, 2022).

Border infrastructure: This refers to fences, walls, roads and access to the border, buildings, sector stations and operating bases such as networked devices and technologies, human actors, including border guards and travellers as well as various forms of knowledge (Bipartisan Policy Centre, 2021; Noori, 2022).

Border security: The measures that in place to protect a state's territorial integrity and sovereignty by preventing unauthorised cross-border movement of people, goods and services (Bipartisan Policy Centre, 2021).

National security: The protection and preservation of a state's sovereignty, territorial integrity and political independence (Bipartisan Policy Centre, 2021).

Sovereignty: Means that a state has the right to govern itself without undue interference from external forces (Couture & Toupin, 2019).

1.11 Chapter summary

In this chapter, the groundwork for analysing the Namibia and Angola borderline security infrastructure has been introduced. The background highlighted cross border crimes and security challenges along the borderline of the two countries. Moreover, the chapter discussed the statement of the problem, identified the objectives of the study and emphasised on the significance and rationale of the study. The chapter further specified the hypotheses, discussed study limitations and delimitations as well as the definition of key terms. The following chapter expands on the topic by reviewing various relevant literature on border security from across the globe.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents an extensive review of relevant literature, thereby establishing the foundation for the study. It examines the historical, political and economic dynamics shaping Namibia and Angola relations, as well as clarifying the bearing on border security infrastructures. The chapter delves into the conceptual underpinnings of border security infrastructure, a delineation of its typologies, the effectiveness criteria and an assessment of the current infrastructure along the Namibia and Angola border. Furthermore, it expounds on the multifaceted concept of national security, the typologies of threats and the specific challenges faced by Namibia, with an emphasis on the ramifications of illegal border activities. The phenomena of illegal border crossings and smuggling of illicit goods are scrutinised, including definitions, statistics, motivations, and mitigation strategies, exemplars of success and implementation obstacles. Ultimately, this comprehensive literature review synthesises existing knowledge to inform the development of hypotheses that guide the empirical investigation.

2.2 Theoretical Framework relations

Matheus (2021) narrates that the significance of aligning theory to a study is to provide a proposed explanation for the relationship among the variables which being tested by the investigator in quantitative research. For this study, the border theoretical framework of Brunet-Jailly (2005, as cited in Nunamaker & Luna-Reyes, 2010), was adopted as it highlights an analysis of factors and issues that influence movements across and around borders. According to the theory, the analysis focuses on four dimensions, namely, political factors, cultural values for communities, economic backgrounds and implementation of policies. Consequently, the four dimensions are

analysed to foster strong relationships, open communication which influencing political, social and economic interactions among actors such as immigration officials, police officers and border communities.

Namibia and Angola are two neighbouring countries in Southern Africa with a shared history of `colonialism and armed conflict (Wessels, 2017). Namibia gained its independence from South Africa in 1990 after a prolonged liberation struggle, while Angola gained independence from Portugal in 1975. According to Amupanda (2021), during the liberation struggle, both countries provided support to each other's liberation movements, with Angola providing bases and military training for the Namibian People's Liberation Army.

Amupanda (2021) and Wessels (2017) agree further that after independence, the two countries established diplomatic relations and have since cooperated in various areas such as trade, transportation and security. According to Wessels (2017), the relationship between the two countries strengthened over the years as evidenced by the establishment of the Namibia - Angola Joint Permanent Commission on Defence and Security, which serves as a platform for the two countries to discuss and coordinate on security matters, including border security. However, the present author has found that despite this cooperation, the porous nature of the borderline between the two countries has made it a vulnerable area for illegal activities such as the smuggling of goods and human trafficking. This highlights the need for further measures to enhance border security and to address the challenges posed by illegal cross-border activities, thereby ensuring the safety and well-being of both nations.

In terms of economic relations, Namibia and Angola have a significant economic relationship, with Angola being Namibia's second-largest trading partner in the region after South Africa (Amupanda, 2021). The two countries have signed various bilateral

agreements to enhance their economic relations, including the Angola-Namibia Joint Commission on Economic Cooperation, which aims to promote trade and investment between the two countries (Saunders, 2019). However, the cross-border trade between the two countries is often informal, with many traders using unofficial border crossings, thereby making it difficult to control and regulate the movement of goods (Amupanda, 2021).

According to Carter and Poast (2017), the economic interdependence between states has created both opportunities and challenges in terms of border security. On one hand, the economic integration has fostered cooperation and collaboration between the two nations, leading to joint efforts in strengthening border security measures (Carter & Poast, 2017). On the other hand, the economic ties have also presented vulnerabilities. The movement of goods and services across the border has provided opportunities for illicit activities such as the smuggling of illicit goods and illegal trade, which can undermine border security efforts (Duncan, 2022). This necessitates a comprehensive approach to border management that balances economic interests with security concerns. By understanding the complex relationship between economic factors and border security, policymakers can develop strategies that promote economic growth while effectively addressing border security challenges in the context of Namibia and Angola.

2.3 Border security infrastructure as a concept

Border security infrastructure refers to the measures, devices and structures that are in place to secure a country's borders from external threats (Alonso, 2019). It encompasses various components that make up the security system of a country with the purpose of ensuring the safety and security of a country's sovereignty, its citizens and resources (Rosenblum, 2018).

Moreover, border security infrastructure includes a wide range of physical barriers (walls, fences and gates), technological devices (cameras, sensors and radars), human resources (border guards, customs officials and immigration officers), legal frameworks and policies that are governing border management (Counter-Terrorism Committee Executive Directorate – United Nations Office of Counterterrorism, 2018; Rosenblum, 2018).

2.3.1 Types of border security infrastructures

Border security infrastructures grouped into broad classifications of physical, technological and human resources (Gambler, 2018). Each category is essential in the domain of securing borders and ensuring national safety.

Physical border infrastructure refers to the tangible structures, facilities and installations established along the borderline for regulating and controlling the movement of people, goods and services (Glouftsios, 2021). The author elaborates that it includes various elements such as fences, walls, barriers, checkpoints, border posts, surveillance systems, lighting, roads and bridges. These physical structures designed to enforce border control policies, enhance security and manage the flow of individuals and goods across the border (Glouftsios, 2021). Similarly, Handmaker and Nalule (2021) explain that physical border infrastructure aims to provide a visible and physical presence that acts as a deterrent to unauthorised crossings while facilitating legal trade and travel.

Technological infrastructures include the use of technological devices such as cameras, sensors and radars to monitor and detect intrusions at the borders (Gambler, 2018). Moreover, the said technology would be deployed in challenging areas regarding the border security in order to conduct surveillance. The surveillance system designed to detect any unauthorised border crossings and alert border guards in real-time

(Granelli, 2020). In the same vein, Granelli (2020) further expound that the surveillance system uses thermal imaging technology, which allows it to detect people even in low-light conditions and it can distinguish between animals and humans to reduce false alarms. Nevertheless, the acquisition and maintenance of surveillance technology can be costly and its effectiveness may be limited, particularly in regions with inadequate connectivity (Glouftsios, 2021).

Human resources involve the deployment of border guards, customs officials and immigration officers, who are responsible for controlling and monitoring the access to the borders of the country (Glouftsios, 2021). By way of supporting this notion, Mabuku and Olutola (2022) emphasise that the uncontrolled movement of people can pose a substantive threat to the country. The assertion by the authors stresses the importance of personnel at every designated border point of entry and exit

2.3.2 Effective border security infrastructure

The effectiveness of border security infrastructure demonstrated by several countries around the world. For instance, the United States of America has implemented a border wall along its southern border with Mexico, aimed at preventing unauthorised immigration and drug trafficking (Bipartisan Policy Centre, 2021). The border wall, coupled with surveillance technology such as cameras and sensors, has significantly reduced the number of illegal crossings into the United States of America. Similarly, Israel has implemented a successful border security infrastructure that includes a fence, military patrols and the deployment of technological devices such as cameras, sensors and radars (Ticktin, 2023). Another essential point is that the implementation of construction of border walls, fences and the deployment of technological devices along borderlines reduced the number of illegal crossings into Israel.

There are also several effective border security infrastructure developments in Africa such as on the borderlines of Kenya-Tanzania and Rwanda-Burundi. A study by Mwai (2017) illustrated the Kenya-Tanzania borderline, opened in 2015, as an example of a highly non-porous borderline, which has greatly improved border security and trade between the two countries. Moreover, the study by Reuben et al. (2021) revealed that the one-stop border post allows an effective coordinated border management and streamlined procedures for travellers and cargo. As a result, there has been a significant reduction in travellers' processing time as well as a reduction in corruption practices at the borders and as a result, there has been an increase in trade and economic growth in areas along the borderline (Reuben et al., 2021).

In another success story, Nugent and Soi (2020) indicated that the Rwanda-Burundi border secured by a combination of physical and technological infrastructure. These physical infrastructures consist of a 200-kilometer-long fence made of concrete posts and mesh-wire that covers much of the borderline. The authors further state that the fence electrified with high-voltage wires to deter unauthorised border crossings. Furthermore, in some areas where the terrain is difficult or the fence is impractical, the border secured by concrete barriers, ditches, or trenches.

In addition to the physical and technological infrastructure as stated by Karim et al. (2021), the Rwanda-Burundi border also secured by a strong legal framework and cooperation between the two countries. The two countries have signed several agreements on border security, including a Memorandum of Understanding on Joint Border Management, which establishes joint border patrols and intelligence-sharing mechanisms (Karim et al., 2021). Overall, the combination of physical and technological infrastructure, legal frameworks and cooperation has made the Rwanda-Burundi border to be one of the most secure borderline in Africa, significantly reducing

incidences, which related to smuggling of illicit goods, illegal migration and other border crimes.

2.4 Namibia and Angola border security infrastructures

Numerous studies conducted by Bélanger and Schimmelfennig (2021), Bello and Olutola (2022), Malatji (2020) and Mamokhere and Chauke (2020) have discovered that countries with porous borders are vulnerable to illicit trafficking, organised crimes and illegal crossing which present a considerable threat to internal security.

Several challenges in maintaining effective border security experienced along the Namibia and Angola borderline (Ashipala, 2021; de Klerk, 2021; de Waal, 2023; Kambowe, 2017; Nembwaya, 2021). These media reports specified that the border line is mostly porous, thus making it easier for the smuggling of drugs, theft of motor vehicles, human trafficking and illegal border crossing along the borders of the two countries.

2.4.1 Current border security efficacy

To assess the effectiveness of the current border security infrastructures along the Namibia and Angola border, elements like physical buildings, equipment and human availability and competency of human resources need considerations. This was expounded by the United Nations Office on Drugs and Crime ([UNODC], 2018), that the effectiveness of border security measures depends on various factors, including the level of training of border control officials, the presence of adequate equipment and the availability of technology such as surveillance cameras and biometric data systems.

Security at borders involves the physical control of borders, mostly done through patrolling of the special border protection force or the military (Letlape, 2021). Border fences and walls are essential physical barriers constructed along borders to impede the movement of people and goods (Bruwer, 2020). In addition, they serve as a

deterrent against illegal border crossings, smuggling and various criminal activities. Nonetheless, the construction of border fences and walls incurs significant expenses, and their maintenance can be financially burdensome (Minnaar, 2022). Based on blocking actions of people, in certain instances, fences and walls have adverse effects on the environment and movements of wildlife.

Border control and management encompass the administration of borders in a country (Malatji, 2020). Moreover, Malatji (2020) further asserts that the task has been entrusted to key government departments such as Home Affairs, Police Services, Receiver of Revenues, Environmental Affairs and the National Defence Force. Moreover, the effectiveness of border management achieved through collaborative and coordinated efforts of all departments.

MHAISS mandated with overall responsibility of border management in Namibia (Government Gazette, 2020). Along the shared border of Namibia and Angola, there are multiple designated ports of entry/exit, which are official border posts where individuals and goods undergo clearance in order to cross the border between two countries. However, these ports are far apart, with some regions having no designated ports of entry/exit, which is a fact that makes it difficult to control the movement of individuals and goods across the borderline (Nembwaya, 2021).

Despite the availability of these infrastructures, the Namibia and Angola border remains porous and there have been numerous reports of illegal activities, including smuggling of goods and illegal migration (de Klerk, 2021). In some cases, individuals resort to using unofficial border crossing points to move across the border, thereby bypassing the designated ports of entry/exit (Kambowe, 2017). A notable example of the consequence of porous land borders articulated in the study carried out by Letlape

(2021), revealed that South Africa experienced a high volume of irregular migrations from neighbouring African countries and other countries.

The absence of adequate infrastructure and technology lead to seamless crossing of smugglers and illegal migrants without detection. Therefore, this has raised a question on the effectiveness of the Namibia and Angola borderline, as evidenced by continued illegal activities (de Klerk, 2021; Kambowe, 2017).

2.4.2 Gaps in the current border security infrastructures

One of the major gaps in the current border security infrastructure along the Namibia and Angola border is the lack of surveillance technology (Kambowe, 2017). The author further states that only few surveillance cameras that are equipped with thermal seeking technology along the Namibia and Angola borderline. This makes it difficult for authorities to monitor and control illegal activities such as smuggling of contrabands and illegal migration. It is worth noting that another major gap is the lack of personnel and resources at the unofficial crossing points along the Namibia and Angola borderline (Nembwaya, 2021). The author noticed that these border crossings are often unmonitored and unmanned, thus making it easy for illegal activities to occur undetected. Additionally, the condition of the borderline between Namibia and Angola is poor, with many areas lacking proper fencing and other physical barriers (Kambowe, 2017). Kambowe further states that a lack of physical barriers makes it easy for individuals to cross the border illegally and for smugglers to move goods across the border undetected. Overall, significant gaps in the current border security infrastructure along the Namibia and Angola borderline need to be addressed to improve border security and reduce illegal activities.

2.5 The intrinsic link between national security and border security infrastructure

National security encompasses the protection and preservation of a state's sovereignty, territorial integrity and citizens' safety from both internal and external threats (Williams & McCulloch, 2023). Contrary to a narrow perspective, Minnaar (2022) emphasises that the concept of national security extends beyond safeguarding the state from threats alone. It encompasses multiple factors, including social, economic, political, military and environmental dimensions, all aimed at protecting the people, dominant values, ideology and way of life of the state (Minnaar, 2022). National security is a significant concern for every nation-state, the reason being that the survival and prosperity of a state depend on its ability to protect itself from internal and external threats.

Minnaar (2022) categorised national security threats into two categories, which are external and internal. External threats originate from outside the country's borders and may come from other states, non-state actors, or transnational groups. Examples of external threats include terrorism, cyber-attacks and foreign invasion. In contrast to external exposures, internal threats originate from within the country and may include political instability, social unrest and economic instability. Andriichenko et al. (2020) also highlights that political instability, economic instability and social unrest in the country are the primary drivers of threats for national security. Numerous studies conducted by Bélanger and Schimmelfennig (2021), Bello and Olutola (2022), Malatji (2020) and Mamokhere and Chauke (2020) have discovered that countries with porous borders are vulnerable to illicit trafficking, organised crimes and illegal crossing which present a considerable threat to internal security.

Namibia is a country that faces various security challenges that are threatening its national security. The country's porous borderline with Angola makes it vulnerable to

illegal border activities such as the smuggling of fuel, illegal migration, drug trafficking and the stealing of motor vehicles (Ashipala, 2021; de Klerk, 2021; de Waal, 2020; Kambowe, 2017; Nembwaya, 2021; Shikololo, 2022a). In the writings of Naro et al. (2020), Namibia is confronted with challenges that are posed by organised crime syndicates that are involved in activities such as wildlife poaching, illegal mining and arms smuggling. Though there is a lack of in-depth empirical studies on the Namibia and Angola border security infrastructure, media reports have highlighted sufficient evidence of potential threats for national security.

The occurrence of illicit border activities has the potential to serve as a source of funding for transnational criminal and terrorist organisations, thereby posing a threat to the stability and security of the country (Kato et al., 2019). In a media report by Shikololo (2022b, c), Angolan fuel smugglers attacked the Namibian Police Officers who were on duty with the aim of tightening the illegal trade of fuel. In addition, majority of vehicle owners including taxi drivers have started to utilise fuel from Angola. As a result, some service stations have been forced to close down their businesses that contributes to the high rate of unemployment in the country. Actually, as reported by Kambowe (2017), illegal border activities pose a threat to public health and safety due to the increased spread of diseases and other health hazards (Kambowe, 2017). These activities, as reported in the media, are indications that the trading of illegal fuel and other types of contrabands can destabilise the country's social and political order. This means that illegal border activities have a significant implication for Namibia's national security.

Illegal border crossings and the smuggling of illicit goods are the two major concerns for countries worldwide (Bruwer, 2020). Kato et al. (2019), define illegal border crossing as an unauthorised crossing of a border by an individual or group of people,

without the appropriate documentation or permission from the government or authorities of the respective countries. Smuggling of illicit goods, according to explanation of Andriichenko et al. (2020), is the movement of goods across borders without payment of the required taxes or customs duties.

Statistics on the number of illegal border crossings and the volume of smuggled goods are not always accurate or available. According to the UNODC (2018), the global illicit drug market was worth an estimated US\$410 billion in 2017. Furthermore, the majority of this market is comprised of cocaine, followed by opiates (including heroin and opium) and cannabis. In the United States alone, it is estimated that illegal drugs are worth over US\$100 billion annually (UNODC, 2018).

The U.S. Customs and Border Protection ([USCBP], 2022) reported on the number of apprehensions and seizures of illegal items at the border. The report indicates that, in the fiscal year 2021, there were 1,554,513 total apprehensions, including 147,044 unaccompanied children. Furthermore, the USCBP seized over 310,000 pounds of drugs and over 8,000 weapons. Similarly, Frontex, an agency responsible for managing the external borders of the European Union (EU), provides valuable reports containing various statistics concerning border crossings and smuggling (Meissner, 2017). These statistics encompass the number of detected illegal border crossings, cases of smuggling of goods and the types of seized goods. In the year 2020, Frontex documented a significant decrease in illegal border crossings into the EU, with over 139,000 cases detected, largely influenced by the COVID-19 pandemic (Frontex, 2021). Many of these crossings occurred in the Western Balkans, followed by the Eastern Mediterranean and the Central Mediterranean (Frontex, 2021). In addition, Frontex reported seizing substantial amounts of drugs, exceeding 30,000 kg and over 1,000 firearms in the same year (Frontex, 2021).

Similarly, the World Migration Report ([WMR], 2020), indicates that a staggering number over 42,000 individuals died or went missing during migration between 2000 and 2019 in the world. According to WMR (2020), the mentioned figure includes those who tragically lost their lives or disappeared while attempting to cross international borders illicitly.

In the Namibian case, there are various media reports on the number of individuals who have been arrested for illegal border crossing and the smuggling of illicit goods. According to the *Namibian Sun* (2019), the Namibian Police in the year 2019, reported that over 120 individuals were arrested for illegal border crossing and the smuggling of illicit goods along the Namibia and Angola border. Based on the report by Shinana (2021), about 623 migrants were caught by law enforcement officials after illegal border crossing into Namibia and 863 Angolan nationals were deported after being arrested for illegal crossings. Between January 2019 and April 2021, David (2021) that 45 vehicles were stolen in Ohangwena Region, of which eight were recovered in Angola. Similarly, a report by Nembwaya (2021) reveals that the theft of motor vehicles increased in Ohangwena Region and 64 Angolan nationals were kept in police custody.

There are various reasons why individuals or groups engage in illegal border crossings and the smuggling of illicit goods between the two countries. These include poverty, lack of employment opportunities and inadequate government resources for border security (Soon & Manning, 2018). Additionally, the differences in commodity prices, corruption, access to public health and business infrastructures as well as evasion of excises and customs duties play a significant role in the smuggling of goods between the two countries (von Lampe, 2019; Bruwer, 2020). For instance, fuel is cheaper in Angola than in Namibia, therefore, the smuggling of fuel has elevated along the

Namibia and Angola borderline. Some factors that influence individuals to engage in illegal border crossings and smuggling of illicit goods emanate from deprived economic, political, social and cultural situations.

Economic factors play a significant role in driving individuals to engage in illegal border activities. For example, people may be motivated to engage in the smuggling of goods because of high taxes or tariffs on imported goods, the fact that make these goods more expensive when purchased from legal merchandise (Bruwer, 2020). Individuals are motivated to engage in illegal border activities and take advantage of the difference in prices of goods between neighbouring countries. This is often the case for goods that are heavily taxed or restricted in one country but are easily accessible and cheaper in another (von Lampe, 2019). Additionally, corruption among government officials and law enforcement agencies can contribute to the facilitation of illegal border activities (Chibira, 2021).

Social and cultural factors also play a role in illegal border activities. For example, communities living along the border may have strong ethnic or cultural ties that transcend national boundaries and may, therefore, engage in cross-border activities such as the smuggling of goods to support their livelihoods or social networks (Chibira & Moyana, 2017). In certain instances, individuals may be driven to participate in illegal border activities as a means of expressing their opposition to government policies (Bruwer, 2020).

While these factors contribute to the prevalence of illegal border activities, they do not necessarily justify such activities. The illegal crossing of borders and smuggling of illicit goods pose significant risks to individuals and communities, including the spread of diseases, exposure to violence and exploitation and the destabilisation of local

economies. Therefore, it is important to develop effective strategies to address these issues and promote legal and safe cross-border trade and migration.

To address illegal border activities effectively, a comprehensive and multifaceted approach is essential. Bewiadi (2022) and Mobolaji & Alabi (2017) highlight that numerous strategies have been employed to combat such activities worldwide, including along the Namibia and Angola border. Reuben et al. (2021) indicate a commonly utilised strategy that involves augmenting the number of border security personnel, such as border patrol officers, immigration officers and customs officials. Soon (2018) explain that this approach is often complemented by the utilisation of advanced technology, including surveillance cameras, sensors and drones, which aid in the identification and interception of illegal border crossings and illicit goods. According to Handmaker and Nalule (2021), another strategy entails enhancing the legal framework to prevent individuals and criminal organisations from exploiting loopholes in the system. Handmaker and Nalule further suggest the implementation of more rigorous border controls, imposing harsher penalties for offenders and fostering enhanced cooperation among diverse law enforcement agencies.

Successful strategies have been implemented by various countries to effectively mitigate illegal border activities. According to Alden (2017), a notable example is found in the United States, where initiatives like "Operation Hold the Line" and "Operation Gatekeeper" were introduced in the 1990s to enhance border security along the US-Mexico border. For example, these initiatives involved augmenting the number of border security personnel and leveraging technology such as surveillance cameras and sensors to identify and discourage illegal border crossings. Consequently, these initiatives have led to a substantial reduction in the number of illegal border crossings.

Similarly, the EU has implemented several measures to combat illegal border activities. These include the establishment of Frontex, an agency responsible for coordinating the management of external borders and the introduction of the Schengen Agreement, which abolished internal border controls between participating countries (Andriichenko et al., 2020). It was further reported that the measures have contributed to a reduction in the number of illegal border crossings and illicit goods smuggling within the EU.

In Africa, one example of a successful strategy meant to minimise illegal border activities is the Joint Border Patrol (JBP) initiative between Ghana and Togo. According to Bewiadzi (2022), this initiative involves the deployment of joint border patrols by security personnel from both countries to curb cross-border crimes such as the smuggling of illicit goods and human trafficking. The author further states that the JBP has resulted in a significant reduction in illegal activities along the Ghana-Togo border. Moreover, Tijjaani and Ozden (2021) explain that the Joint Border Post is a border control mechanism that is designed to facilitate cross-border trade and movement of people while enhancing border security. The authors further describe it as an integrated border management system that is aimed at enhancing the effectiveness and efficiency of border controls. Bewiadzi (2022) highlight that JBP have been established in various parts of Africa, including the borders of Rwanda and the Democratic Republic of Congo, Kenya and Uganda as well as Zimbabwe and South Africa.

The JBP including the one-stop border posts whereby both countries' border control agencies operate from the same location, collaborate and speeding up the processing of people and goods. Another approach is through a coordinated border management that involves the sharing of information and intelligence between border control

agencies, as well as joint operations and patrols to enhance border security. Finally, the use of technology that plays a role through the use of biometric data capturing and sharing, electronic cargo tracking and remote monitoring of border posts to enhance efficiency and security.

Another African example is the Integrated Border Management System (IBMS) implemented by Rwanda and Tanzania along their shared border. The IBMS includes the use of modern technology such as biometric scanners and surveillance cameras to monitor border activities and prevent illegal crossings (Mpakaniye, 2021). The author found that this system has led to a reduction in the smuggling of illicit goods and other illegal activities along the Rwanda-Tanzania border. The IBMS system in Rwanda and Tanzania is based on four interconnected elements. These elements include physical infrastructure like border posts, access roads and fences; technological infrastructure encompassing biometric systems, the closed-circuit television (CCTV) cameras and surveillance drones; human resources provided by joint border patrol teams of both countries and institutional frameworks of joint border management committee for coordination and cross border activities.

The biometric system used in the IBMS captures the biometric data of all individuals crossing the border, whereby the system is equipped with fingerprints and facial recognition technology (Mpakaniye, 2021). This data is then stored in a central database, which enables border control authorities to identify and track individuals, who cross the border illegally or engage in criminal activities (Mpakaniye, 2021). The CCTV cameras used in the IBMS are equipped with license plate recognition software that enhances the identification and the tracking of vehicles crossing the borders.

In addition to the technological infrastructure, the joint border patrol team works to enhance the effectiveness of the IBMS system (Kamazima, 2018). The author

elaborates that the team comprises of officials from various government agencies, including customs, immigration and security services, who work together to detect and prevent illegal activities such as the smuggling of goods, human trafficking and illegal immigration. Overall, the IBMS system in Rwanda and Tanzania has helped to enhance border security by providing real-time information on cross-border movements and enabling authorities to respond quickly to any security threats along the borderline.

While certain strategies have demonstrated success, the implementation of effective measures to reduce illegal border activities continues to pose challenges (Vusha, 2022). Some of the major challenges is the porosity of borders, lack of resources such as funding, well trained personnel, advanced technology, as well as poor coordination among government departments responsible for border control (Akinyemi, 2019; Malatji, 2020; Vusha, 2022). In these cases, countries that do not have the necessary resources such as deploying of sufficient border security personnel, investing in training and advanced technology and lacking communication between border agencies, would find it difficult to maintain security at borders.

A study by Chibira (2021), on improving border efficiency in Sub-Sahara Africa, listed bribery and corruption among the border security officials as the challenge, which can undermine the effectiveness and implementation of border security measures. In the same vein, the author highlights that corruption can have the detrimental effects of causing officials to disregard illegal activities or even engaging in collusion with criminal organisations. In another study by Mobolaji and Alabi (2017), challenges arose in implementing effective measures in regions affected by political instability and conflicts between neighbouring countries, where cooperation and trust may be lacking.

The literature review suggests that border security infrastructures can be an effective tool for reducing illegal border activities. Studies have shown that countries with stronger border security infrastructures have lower rates of illegal border crossings and smuggling activities (Mayer, 2017). Furthermore, physical barriers such as fences and walls have been found to be effective in deterring illegal border activities (Minnaar, 2022). For example, a study by Mayer (2017) found that the construction of a border fence between the United States and Mexico reduced the number of illegal border crossings between the two countries. Similarly, a study by Chibira and Moyana (2017) found that surveillance technologies such as drones and cameras could be effective in detecting and preventing illegal border crossings along the South African borders.

However, other studies have also found that the effectiveness of border security infrastructures depends on a range of factors, such as the terrain, the type of infrastructure and the resources available for monitoring and the maintenance of such infrastructure (Bruwer 2020; von Lampe, 2019). For example, Bruwer (2020) found that border walls can be easily breached by determined smugglers, whereby underground tunnels and other passages are often used to evade detection.

The effectiveness of security infrastructure measures is influenced by various factors such as funding, personnel and technology. Funding is one of the critical factors that affect the effectiveness of the security infrastructure. According to a study by Otuoma and Okal (2021), inadequate funding is a significant challenge faced by border security agencies. The study found that a lack of resources such as vehicles, communication equipment and surveillance tools hinder the ability of border security personnel to carry out their duties effectively. Similarly, a report by UNODC (2018) highlighted insufficient funding as a significant impediment to effective border management.

Thus, it can be concluded that without adequate funding, it is impossible to ensure the security of the Namibia and Angola border.

Another critical factor that affects the effectiveness of the security infrastructure is a lack of personnel. Adequate staffing is necessary for the security infrastructure to be effective. According to a report by the *Namibian Sun* (2019), the Namibian Police Force (NAMPOL) is facing a shortage of personnel. The report highlights that the shortage of personnel has affected the ability of the NAMPOL to cover the vast border area adequately.

Outdated technology is another critical factor that affects the effectiveness of the security infrastructure. The use of technology such as surveillance cameras, drones and sensors can improve the ability of border security personnel to detect and prevent illegal activities. According to a report by the African Union Commission (2018), the use of technology is an essential element of border security. The report highlights that technology has the potential to enhance the efficiency and effectiveness of border security operations. Similarly, a study by Tekleab et al. (2019) found that the use of advanced technology such as drones and sensors improved the ability of border security personnel to detect and prevent illegal activities.

2.6 Chapter summary

This literature review examined the challenges posed by the border security infrastructures between Namibia and Angola and their impact on national security. An overview on the theoretical framework inclusive of the historical, political and economic relations between the two countries was provided to establish context. The review also analysed the direct impact of the border security infrastructures on national security. Furthermore, this chapter discussed the definitions, types and challenges associated with border security infrastructures, drawing examples from successful

implementations in Africa. Moreover, the review addressed the types of threats to national security and their specific implications for Namibia. The issues of illegal border crossings and the smuggling of illicit goods were examined, including the presentation of relevant statistics and the exploration of underlying reasons driving such activities. Strategies for minimising illegal border activities were also discussed, featuring successful examples from various contexts. The review concluded by emphasising the importance of the reviewed literature in developing the hypotheses for the study, thereby contributing to the overall research framework. The next chapter explains the research methodology used for this study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter covers the research methodology that was used to analyse the border security issue along the Namibia and Angola borderline. The methodology includes the research approach, research design, population, sample size, sampling procedure, research instruments, data collection procedures, data analysis, validity and reliability and ethical considerations.

3.2 Research approach

As defined by Ganesha and Aithal (2022), a research approach refers to the predominant reasoning employed to examine the relationships between dependent and independent variables in the initial stages of the research process. The literature identifies three primary research approaches: qualitative, quantitative, and mixed methods (Creswell & Creswell, 2018). Each approach sums up distinct beliefs about the nature of knowledge, how it is acquired, and the overarching purpose of research. This study adopts a quantitative research approach, aligning with a positivist philosophical stance that asserts the existence of an objective reality that can be measured and analysed. The quantitative approach is particularly suitable for this research, as it facilitates the systematic collection and analysis of numerical data, thereby allowing for the identification of patterns and relationships (Bryman, 2015).

A deductive approach was employed as the guiding framework for this research. This methodology allows for hypothesis testing derived from existing theories and literature, facilitating the formulation of specific research questions based on general premises. According to Bryman (2015), a deductive approach enables researchers to derive specific conclusions from broader theoretical frameworks. This approach was

instrumental in structuring research design, collecting, and analysing data to test the formulated hypotheses.

3.3 Research design

A research design serves as a structured blueprint for collecting and analyzing numerical data to address specific research questions (Leedy & Ormrod, 2015). This study utilised a quantitative research design, which is particularly effective in identifying relationships and trends within the collected data. As Creswell and Creswell (2018) states that quantitative research is inherently concerned with numerical data and permitting researchers to derive statistical insights.

For this study, a survey research design was employed to gather data from security agencies and services operating at designated border posts along the Namibia-Angola border. The survey method enabled the collection of substantial data within a condensed timeframe, thereby enhancing the efficiency of data acquisition. A Likert scale questionnaire was utilised to assess respondents' perceptions regarding the structural integrity of border facilities, the effectiveness of current border security infrastructure, and existing strategies to mitigate illegal border activities.

The survey design also facilitated the collection of demographic information from respondents, which was crucial for identifying variables that may influence the effectiveness of border security measures. Consequently, a quantitative research design was selected, as it permitted the analysis of statistical data to explore significant relationships pertinent to the study's hypotheses.

3.4 Population of the study

The population for this study were various security agencies and services operating at the designated border posts along the Namibia-Angola border. According to the security assessment report, the population at the four border posts (Oshikango,

Omuvelo waKasamane, Omahenene and Ruacana) comprises of 228 personnel including Border and Infrastructure Protection Officers, Immigration Officers, Customs and Excise Officers and Namibia Veterinary Services Officials.

Table 1: Number of Personnel by Border Post and Group

Border Post	Group				Total
	Border and Infrastructure Officer	Immigration Officer	Customs and Excise Officer	Namibia Veterinary Services Official	
Oshikango	59	19	38	2	118
Omuvelo waKasamane	35	8	8	2	53
Omahenene	20	11	7	2	40
Ruacana	12	4	1	0	17
Total	126	42	54	6	228

3.5 Sample size

Studying the whole population can be time-consuming, expensive and impractical (Kharuddin et al., 2020). The researcher used Taro Yamane's formula to determine the required size from the population of 228 personnel.

The formula used is as:

$$n = \frac{N}{1 + N(e)^2}$$

Where: n = the sample size

N = population size of the study

e = the desired level of precision

This is worked below:

$$n = 228 / (1 + 228 * 0.05 * 0.05)$$

$$n = 228 / (1 + 0.57)$$

$$n = 228 / 1.57$$

$$n = 145$$

Using the above formula, the sample size came to one hundred and forty-five (145) participants, which was sufficient for this study. The desired level of precision is 0.05 (5%), which is a commonly accepted level as it provides a desirable level of accuracy in research.

3.6 Sampling procedure

The sampling procedure used in this study was stratified random sampling. According to Kothari (2013), stratified random sampling is a sampling technique that involves dividing the population into smaller groups or strata based on a particular characteristic or attribute and then selecting samples from each stratum based on the proportion of the stratum in the population.

In this study, the population of security personnel was divided into four strata based on their respective job roles: “Border and Infrastructure Protection Officers”, “Immigration Officers”, “Customs and Excise Officers” and “Namibia Veterinary Services Officials”. The sample size for each stratum was based in proportion of each in the population, which was calculated as shown in Table 2, below.

Table 2: Sample Size Calculation

Group	Calculation	Number in Sample Size (n)
Border and Infrastructure Protection Officers	$n = (126/228) * 145$	80
Immigration Officers	$n = (42/228) * 145$	27
Customs and Excise Officers	$n = (54/228) * 145$	34
Namibia Veterinary Services Officials	$n = (6/228) * 145$	4
Total		145

The stratified random sampling was deemed appropriate for this study as it allowed for a more representative sample of the population while still maintaining the necessary proportionality of each stratum. This method also ensured that each stratum was adequately represented in the sample, which is important for ensuring that the findings of the study are generalizable to the population of security personnel at the designated border posts.

3.7 Research instruments

The research instrument chosen for this study is a Likert-type Structured Questionnaire. A study by Adeniran (2019) explains that the Likert scale is widely used in research as it allows participants to indicate their level of agreement or disagreement with a statement or a series of statements on a scale. For this study, a five-point scale was used ranging from “Strongly Disagree” to “Strongly Agree”. The responses obtained from the questionnaire were likely to be accurate and representative of the participants' views.

This was particularly useful in this study, as the aim was to quantify the extent of the challenges faced by security agencies in maintaining border security and to identify the most effective strategies for minimising illegal border activities.

3.8 Data collection procedures

In this study, the data collection procedure involved the distribution of a self-administered questionnaire to the selected sample of security personnel at the Oshikango, Omuvelo waKasamane, Omahenene and Ruacana border posts along the Namibia and Angola borderline. The researcher circulated the questionnaires in a hard copy and collected them once the respondents had completed the task.

To ensure that the data collection process ran smoothly and efficiently, the researcher first obtained clearance from the relevant authorities. The researcher also provided a clear explanation of the study's purpose and procedures to the participants and obtained their informed consent. The researcher also assured the participants of the confidentiality of their responses and the anonymity of their identities.

After obtaining clearance and informed consent, the researcher distributed the questionnaire to the selected participants. The researcher provided clear instructions on how to complete the questionnaire and set a deadline for returning the completed questionnaire. The participants had the option of returning the completed questionnaire directly to the researcher.

The use of a self-administered questionnaire was appropriate for this study because it allowed the participants to provide their answers anonymously without any influence from the researcher's presence or pressure. Once the questionnaires were collected, the researcher carefully examined each completed questionnaire to ensure that all questions had been answered.

3.9 Data analysis

The study used the descriptive statistics and inferential statistics for measuring and assessing the data using the Statistical Package for the Social Sciences (SPSS) software. According to Kaur et al. (2018), descriptive statistics are used to summarise

data in an organised manner by describing the relationship between variables in a sample or population and it should always occur before making the inferential comparisons. Furthermore, descriptive statistics are used to give expected summary statistics of variables being studied (Kabelo & Gakuu, 2019). Inferential statistics, on the other hand, were used to draw conclusions about the population based on the data collected from the sample. Thus, descriptive and inferential statistics were used on this study to answer each research question and to test each hypothesis. The data were presented using tables, charts and graphs to illustrate clearly, the findings.

The first objective, which sought to assess the current condition of the borderline, descriptive statistics such as frequencies and percentages were used to summarise the responses of the participants.

The second objective, which sought to identify the challenges faced in maintaining the structural integrity of the borderline, descriptive statistics such as means and standard deviations were used to summarise the responses of the participants.

The third objective, which sought to determine the effectiveness of strategies used in minimising illegal border activities, inferential statistics such as correlation analysis were used to test the relationship between the variables. A multiple regression analysis was also used to assess the predictive power of the independent variables on the dependent variable. The independent variable is the strategy that is used in minimising illegal border activities. The dependent variable is the effectiveness of those strategies, which were measured through the responses of the security personnel in the sample population to the questionnaire. The effectiveness of the strategies was assessed based on the degree to which they have minimised illegal border activities as perceived by the security personnel.

The fourth objective, which sought to identify the challenges faced in maintaining the structural integrity of the borderline, descriptive statistics such as means and standard deviations were used to summarise the responses of the participants.

Hypothesis 1, which states that there is a significant relationship between the current condition of the borderline and illegal border activities, a correlation analysis was conducted. Similarly, Hypothesis 2, which states that the effectiveness of the security infrastructure is influenced by funding, personnel and technology, a correlation analysis was conducted to test the strength and direction of the relationship between the two sets of variables.

3.10 Validity and reliability

The quality of the research hinges on validity and reliability. This ensures that the study accurately captures what it is designed to measure and delivers findings that can be consistently reproduced.

3.10.1 Validity

Validity in quantitative research denotes the meaningful and useful inferences from scores on particular instruments (Creswell & Creswell, 2018). To ensure the validity of the content, the questionnaire was designed based on extensive literature reviews, expert opinions and the research objectives. To ensure face validity, the questionnaire was pre-tested with a sample of the target population to ensure that the questions are clear, relevant and easy to understand. To assess the construct validity of the instrument, the exploratory factor analysis (EFA) was conducted on the data that was collected. According to Costello and Osborne (2019), EFA is a complex statistical technique with few absolute guidelines that can be widely utilised and broadly applied for shaping the field of test in social sciences. For this study, EFA helped in identifying

the underlying factors that contribute to the effectiveness of the strategies used in minimising illegal border activities.

3.10.2 Reliability

Amirrudin et al. (2021), state that reliability in measurement implies consistency and precision. This means that the test can be done at different times, however, it has to yield the same answer.

In this study, reliability was achieved by assessing consistency through using Cronbach's alpha coefficient. According to Joseph and Rosemary (as cited in Adeniran, 2019), Cronbach's alpha is developed to measure the internal consistency reliability of an instrument used in collecting data. Furthermore, the value of Cronbach's Alpha is expressed as a number between .00 and 1.0. that is used for measuring internal consistency. This helped the researcher to measure the inter-relatedness of the questions in the instrument and to ensure that they measure the same construct.

3.11 Ethical considerations

Ethical considerations were adhered to in this study. Ethical clearance was obtained from the from the University of Namibia Decentralised Ethics Committee (Appendix A). The Postgraduate Research Support Services issued research permission (Appendix B). Furthermore, the researcher sought permission from the National Commission on Research Science and Technology as well as the Ministry of Home Affairs, Immigration, Safety and Security for collecting of data. The researcher ensured that the principle of confidentiality was strictly upheld during the data collection process. Firstly, before the administration of the questionnaire, informed consent was sought from all the participants to whom it was outlined that participation in the study was voluntary. Participants were provided with information about the

nature of the study, their right to decline participation or to exit at any stage and the assurance of anonymity and confidentiality of the data they provide. Secondly, participants were not subjected to any harm or discomfort during the study. Thirdly, the participants were duly informed that the data collected in this study would be used solely for the purpose of this research. The researcher ensured that the data is kept confidential and anonymous to protect participants' privacy. Fourthly, the researcher ensured that the data collection procedures did not interfere with the participants' work schedules or other official duties.

The collected data were kept on a password protected computer or folder where only the researcher had access to it.

3.12 Chapter summary

The chapter presented the design, population, sample size, sampling procedure, research instruments, data collection, validity, reliability, and ethical considerations. The sample size was determined using Taro Yamane's formula, which resulted in a sample of 145 respondents. The sampling procedure used was a stratified random sampling technique and the data collection instrument used was a structured Likert-type questionnaire. Data was analysed using both descriptive and inferential statistics and ethical considerations were adhered to throughout the study. The following chapter presents the results obtained through the survey.

CHAPTER FOUR

PRESENTATION OF THE FINDINGS

4.1 Introduction

This chapter presents the key findings arising from the empirical investigation. It commences by reporting the response rate, respondents' biological information, an assessment of the threats to national security and the hypotheses results obtained through the survey.

4.2 Findings

4.2.1 Response rate and reliability analysis

Table 3 delineates the response rates and valid response counts across distinct groups from a sample of 145 respondents. While response rates for individual groups vary, the overall response rate denotes a moderately high level of engagement. Despite fluctuations among specific groups, the aggregated response rate suggests a generally favourable participation level, thus reflecting a substantial contribution to the survey from the diverse sampled groups.

Table 3: Response Rates and Valid Responses by Group

Group	Number in Sample	Number of Valid Responses	Response Rate (%)
Border and Infrastructure Protection Officers	80	68	91
Immigration Officers	27	21	88
Customs and Excise Officers	34	25	75
Namibia Veterinary Services Officials	4	4	100
Total	145	118	87

Table 4 displays the reliability statistics, specifically the Cronbach's Alpha coefficient and the number of items used in the Likert scale questionnaire. The Cronbach's Alpha value of 0.717 suggests a moderate level of internal consistency among the Likert scale items. Generally, a Cronbach's Alpha value above 0.7 is considered acceptable for research purposes, indicating a satisfactory level of reliability.

Table 4: Cronbach' Alpha Reliability Factor

Reliability Statistics	
Cronbach's Alpha	Number of items
0.717	45

4.2.2 Biographical information of respondents

This section presents key demographic details of the participants involved in the study. It encapsulates vital data such as age, gender, occupational position, educational attainment and the duration of experience in border-related work. This information serves to provide a comprehensive understanding of the diverse profile of participants contributing to the assessment of the Namibia and Angola borderline security infrastructure and its implications for national security.

Age

The age distribution, as represented in Figure 1, shows a diverse range of participants' ages of those who partook in the study on the Namibia and Angola border line security infrastructure. This distribution underscores a significant concentration of participants within the age brackets of 36-55 years, which collectively contributed the majority (70%) of the demographic sample. Notably, the older age group of 56 years and over accounts for a considerable proportion with 19% of the participants, thus signifying a diverse representation of ages within the study cohort.

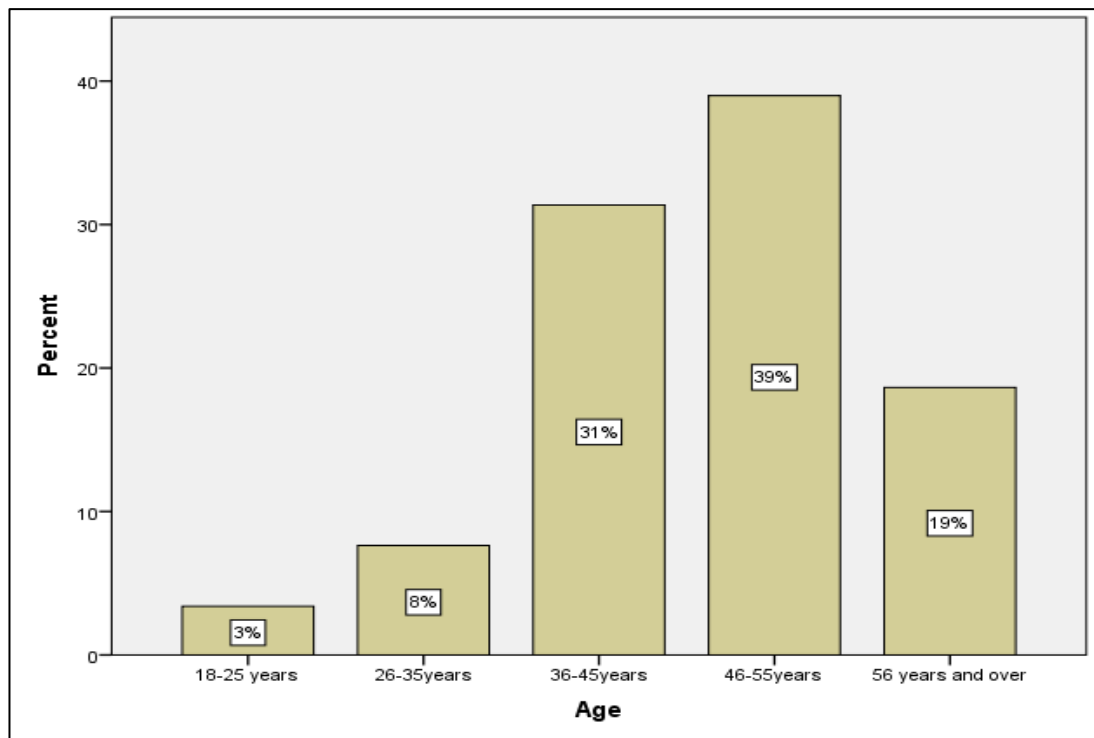


Figure 1: Age distribution of participants

Gender

The gender distribution, as outlined in Figure 2, portrays the representation of participants based on gender within the study. This distribution illustrates a noticeable gender imbalance within the participant cohort, with a higher representation of males, accounting for approximately two-thirds (64%) of the total participants. Conversely, females comprise a smaller proportion, representing around one-third (36%) of the overall demographic sample.



Figure 2: Gender distribution among participants

Education level

This distribution in Figure 3 reveals a predominant representation of participants with a high school education, constituting the majority at 65%. Furthermore, individuals holding a bachelor's degree or diploma comprise a combined 27% of the participant cohort. Notably, a smaller proportion (8%) has an educational background that is limited to the primary school level.

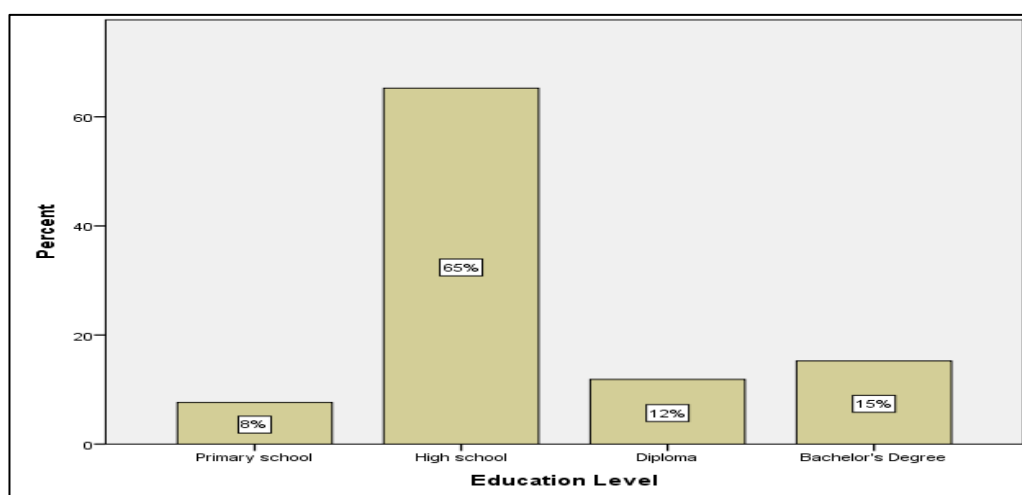


Figure 3: Educational attainment of participants

Occupational representation

The distribution of participants based on job titles as depicted in Figure 4 illustrates the diverse roles within the study. Police officers make up the largest segment of 58% in this study. Customs and excise officers and immigration officers come in second and third, at 20% and 18% respectively. Veterinary Officers rounded out the participants at 4%.

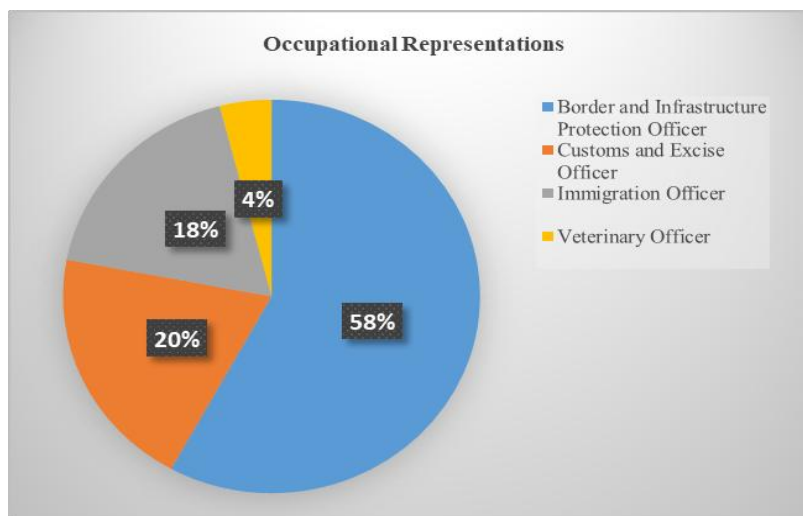


Figure 4: Occupational representations of participants

Period of service

The distribution of participants based on period of service in border-related work as shown in Figure 5, delineates the tenure within the study. This distribution highlights a substantial majority (64%) of participants having served for more than 15 years in border-related work, which signifies an extensive and experienced segment within the demographic sample. Participants in service for a period of 11-15 years and 6-10 years show two equal peaks at 14%, while the 2–5-year group represents a smaller proportion at 8%.

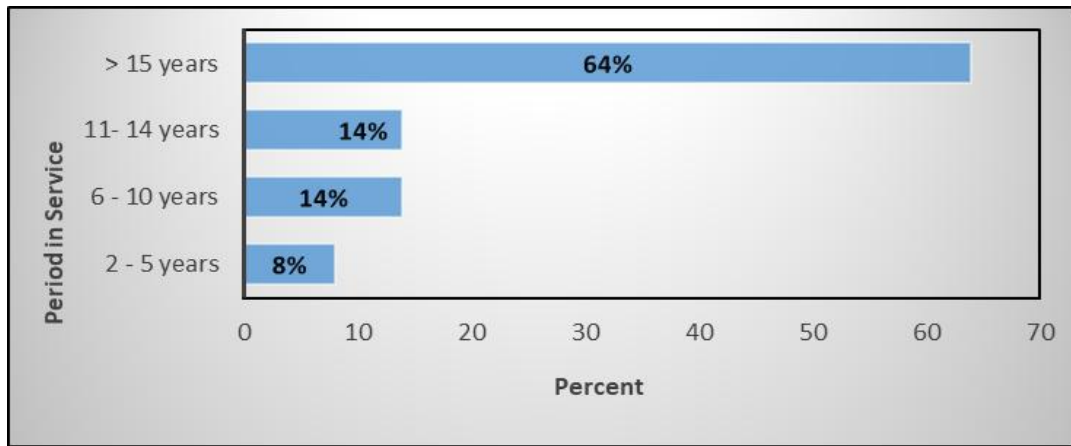


Figure 5: Period of service in border work among participants

4.2.3 An assessment of threats to national security

Table 5 offers a comprehensive overview of participants' sentiments regarding the assessment of threats to national security, thus unveiling their perspectives on various facets of border security measures. An analysis of the responses reveals nuanced insights and notable trends within the realm of national security considerations.

Participants expressed varying levels of confidence in the effectiveness of current border security measures to prevent threats and deter criminal activities. Approximately 70% of respondents either disagree or express uncertainty about the

adequacy of these measures, suggesting prevalent doubts regarding their efficacy in curbing potential threats.

Moreover, a significant majority accounting for 63% of participants strongly acknowledges the adverse impact of limited resource allocation on border control, thus asserting that the lack of resources significantly hinders effectiveness.

Table 5: Participant Responses on Border Security Threat Assessment

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	Row N %	Row N %	Row N %	Row N %	Row N %
The current border security measures are adequate to prevent threats to national security	41.5%	28.8%	7.6%	13.6%	8.5%
The current border security measures are effective in deterring criminal activity	34.7%	33.1%	11.9%	15.3%	5.1%
The current border security measures have been successful in reducing illegal border crossings	24.6%	31.4%	26.3%	6.8%	11.0%
The lack of resources allocated to border security has hindered the effectiveness of border control	5.1%	8.5%	23.7%	43.2%	19.5%
There is a need for increased collaboration between different security agencies to improve border security	2.5%	0.0%	5.1%	64.4%	28.0%
The lack of training for security personnel has contributed to ineffective border control	2.5%	5.1%	9.3%	56.8%	26.3%
The use of technology such as drones and cameras can enhance border security	0.8%	2.5%	7.6%	36.4%	52.5%
The increase in illegal border activities poses a significant threat to national security	0.8%	0.0%	3.4%	35.6%	60.2%

One striking consensus among participants emerged regarding the necessity of increased collaboration among different security agencies to bolster border security. An overwhelming 92.4% of respondents agree on the imperative need for heightened cooperation by recognising it as pivotal in fortifying overall security measures.

The participants underline the importance of both training for security personnel and the integration of technological advancements in border security strategies. Nearly 83.1% emphasise the significance of training programmes, thus emphasising their role in augmenting the effectiveness of border control. Additionally, an overwhelming majority, constituting 89.0% of respondents, acknowledges the potential benefits of technology, such as drones and cameras, in enhancing border security measures.

Undoubtedly, there is a palpable concern among participants regarding the escalating threat posed by illegal border activities. An overwhelming 95.8% perceive the surge in such activities as a significant threat to national security, thus underlining the imperative need for robust measures to address this escalating concern.

4.2.4 Analysis of illegal border crossings and smuggling of goods

Table 6 below presents the composite responses from participants regarding the magnitude of illegal border crossings and the smuggling of illicit goods across the Namibia and Angola borders.

It encapsulates participants' opinions on various aspects related to these activities, thereby providing an insightful understanding of their perceptions and concerns regarding border security challenges.

A substantial 95.7% of participants agree or strongly agree that there has been a significant increase in illegal border crossings over the past four years, thus indicating a perceived surge in such activities within this timeframe.

Participants expressed consensus (98%) regarding the primary motivation behind illegal border crossings, attributed mainly to individuals seeking better economic opportunities. Additionally, 95.1% agree that the majority of smuggled illicit goods were drugs.

An overwhelming 93.3% of respondents agree or strongly agree that the lack of robust border security measures has contributed to the increase in illegal activities, thus highlighting the perceived association between inadequate measures and the rise in illicit crossings and smuggling.

There is acknowledgment (76.2%) that collaboration between different security agencies has improved the detection of illegal activities. Moreover, 79.1% agree that the government should increase penalties for individuals involved in such activities, thus implying the necessity for stricter punitive measures.

Participants widely support (83.1%) the view that the prevention of illegal border activities should be prioritised as a national security issue. Conversely, a minority (22.9%) perceives the current penalties for illegal activities at the border as sufficient, indicating a divergence in opinions regarding the adequacy of existing punitive measures.

Table 6: Perspectives of Participants on Illegal Border Crossings and Smuggling of Goods

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	Row N %	Row N %	Row N %	Row N %	Row N %
There has been a significant increase in the number of illegal border crossings over the past four years.	2.5%	0.0%	1.7%	20.3%	75.4%
The majority of illegal border crossings are made up of individuals seeking better economic opportunities.	0.0%	0.0%	1.7%	17.8%	80.5%
The majority of illicit goods smuggled across the border are drugs.	0.0%	1.7%	3.4%	24.6%	70.3%
The lack of border security measures has contributed to the increase in illegal activities.	0.0%	3.4%	3.4%	45.8%	47.5%
The collaboration between different security agencies has improved the detection of illegal activities.	1.7%	11.0%	11.0%	55.9%	20.3%
The government should increase penalties for individuals involved in illegal border activities.	3.4%	6.8%	11.0%	22.0%	56.8%
The current penalties for illegal activities at the border are sufficient.	13.6%	29.7%	33.9%	8.5%	14.4%
The government should prioritise the prevention of illegal border activities as a national security issue.	5.9%	4.2%	6.8%	39.0%	44.1%

4.2.5 Evaluation of strategies for minimising illegal border activities

Multiple linear regression was performed to assess the predictive power of certain independent variables (statements D2, D3, D4, D6, D8, D9 – See Appendix A – Structured Questionnaire for full statements) on the perceived effectiveness of current strategies used to combat illegal border activities (D1 - dependent variable). The results of the findings are presented in Tables 7, 8 and 9.

Table 7 shows the performance of the current strategies on combating illegal border activities through the training of security personnel, the use of technology, improved border infrastructure, increasing collaboration, establishing more checkpoints and increasing funding. The R Square (R^2): 0.175 indicates that approximately 17.5% of the variance in the perceived effectiveness of strategies is explained by the included independent variables. Adjusted R Square: 0.130 accounts for the degree of independent variables' influence on the dependent variable while considering the sample size and the number of predictors. Std. Error of the Estimate: 1.04233 is the standard deviation of the residuals for measuring the model's accuracy in predicting the perceived effectiveness of strategies.

Table 7: Overview of the Current Strategies Model's Performance

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.418 ^a	.175	.130	1.04233
a. Predictors: (Constant), D9, D2, D6, D4, D8, D3				

The ANOVA results in Table 8 show a significant effect ($p\text{-value} = 0.001$), indicating that at least one independent variable significantly predicts the perceived effectiveness of strategies.

Table 8: Analysis of Variance for the Current Strategies Regression Model

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25.515	6	4.253	3.914	.001 ^b
	Residual	120.595	111	1.086		
	Total	146.110	117			
a. Dependent Variable: The current strategies used to combat illegal border activities are effective.						
b. Predictors: (Constant), D9, D2, D6, D4, D8, D3						

Table 9 displays regression of coefficient for the current strategies predictors. The intercept is -0.600, but its significance is not apparent ($p\text{-value} = 0.679$). Among the predictors, D4 (statement D4: "There is a need for increased collaboration between different security agencies to improve border security") has a significant positive impact ($p\text{-value} = 0.000$) on the perceived effectiveness of strategies, with a standardised coefficient (Beta) of 0.367. This implies that an increase in the agreement with statement D4 is associated with a stronger perception of strategy effectiveness.

Table 9: Coefficients for the Current Strategies Predictors

Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	(-0.600)	1.446		(-0.415)	.679
	D2	(-0.076)	.122	(-0.055)	(-0.624)	.534
	D3	(-0.101)	.126	(-0.084)	(-0.802)	.424
	D4	.383	.099	.367	3.877	.000
	D6	.060	.080	.070	.747	.456
	D8	.383	.227	.152	1.685	.095
	D9	.227	.175	.120	1.297	.197
a. Dependent Variable: The current strategies used to combat illegal border activities are effective						

4.2.6 Comprehensive assessment of border line structural integrity

The provided ANOVA results (Table 10) and subsequent multiple comparisons tests (Table 11) are aimed at assessing the differences in the computed mean of current structural integrity scores among different occupational representations (Border and Infrastructure Protection Officer, Immigration Officers, Veterinary Officers, Customs and Excise Officers,) concerning the Namibia and Angola borderline.

Table 10: Analysis of Variance for the Structural Integrity Regression Model

ANOVA					
COMPUTE Current Structural Integrity = MEAN (E1,E2,E3,E4,E5,E6,E7,E8,E9,E10)					
	Sum of Squares	df	Mean Square	F	Sig.
Between - Groups	.346	3	.115	.935	.426
Within - Groups	14.072	114	.123		
Total	14.419	117			

Table 11 presents the analysis of variance that separates the total variances into two components namely between-groups variance and within-groups variance. The between-groups variance reflects the variability in the mean scores between different occupational representations. In contrast, within-groups variance represents the variability in the scores observed within each occupational representation. The p-value (Sig.) of 0.426 which is greater than the commonly used alpha level of 0.05 indicates that there is no significant difference in mean current structural integrity scores between different occupational representations.

Table 11: Current Structural Integrity Multiple Comparisons

Multiple Comparisons						
Dependent Variable: COMPUTE						
Current Structural Integrity = MEAN (E1,E2,E3,E4,E5,E6,E7,E8,E9,E10)						
Tukey HSD						
(I) Job title	(J) Job title	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Border and Infrastructure Protection Officer	Immigration Officer	.07990	.08771	.799	(-0.1488)	.3086
	Customs and Excise officer	.06740	.08342	.851	(-0.1501)	.2849
	Veterinary Officer	.23324	.16280	.482	(-0.1912)	.6577
Immigration Officer	Border and Infrastructure Protection Officer	(-0.07990)	.08771	.799	(-0.3086)	.1488
	Customs and Excise officer	(-0.01250)	.10498	.999	(-0.2862)	.2612
	Veterinary Officer	.15333	.17483	.817	(-0.3025)	.6092
Customs and Excise officer	Border and Infrastructure Protection Officer	(-0.06740)	.08342	.851	(-0.2849)	.1501
	Immigration Officer	.01250	.10498	.999	-0.2612	.2862
	Veterinary Officer	.16583	.17272	.772	-0.2845	.6162
Veterinary Officer	Border and Infrastructure Protection Officer	-0.23324	.16280	.482	-0.6577	.1912
	Immigration Officer	-0.15333	.17483	.817	-0.6092	.3025
	Customs and Excise officer	-0.16583	.17272	.772	-0.6162	.2845

Table 12 presents pairwise comparisons of mean differences between occupational representations. Notably, none of the pairwise comparisons show statistical significance (all Sig. > 0.05), thus suggesting no significant discrepancies in current structural integrity perceptions between any two occupational representations.

Table 12: Current Structural Integrity Tukey HSD

COMPUTE		
Current Structural Integrity = MEAN(E1,E2,E3,E4,E5,E6,E7,E8,E9,E10)		
Tukey HSD^{a,b}		
Occupation Representation	N	Subset for alpha = 0.05
		1
Veterinary Officer	5	3.9800
Immigration Officer	21	4.1333
Customs and Excise officer	24	4.1458
Border and Infrastructure Protection Officer	68	4.2132
Sig.		.327
Means for groups in homogeneous subsets are displayed		
a. Uses Harmonic Mean Sample Size = 13.158		
b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.		

The Tukey Honestly Significant Difference (HSD) test explores mean score differences among occupational representations for current structural integrity. The obtained Sig. value (0.327, $p > 0.05$) suggests no significant disparities between occupational representations, thereby concluding that all job categories can be categorised similarly based on their perceived current structural integrity scores

4.3 Hypotheses results

4.3.1 Correlation analysis: Impact of border line security infrastructure on national security

This section explores the correlation analysis results aimed at examining the relationship between perceptions of the Namibia and Angola borderline security infrastructure and their subsequent impact on national security. The analysis investigates whether varying perceptions regarding borderline security infrastructure are associated with differing perceptions of national security in both countries.

Table 13: Correlation Table for Impact of Borderline Security Infrastructure on National Security

Correlations			
		Perceptions of Border Line Security Infrastructure	Perceptions of National Security
Perceptions of Border Line Security Infrastructure	Pearson Correlation	1	.577**
	Sig. (2-tailed)		.000
	N	118	118
Perceptions of National Security	Pearson Correlation	.577**	1
	Sig. (2-tailed)	.000	
	N	118	118
**. Correlation is significant at the 0.01 level (2-tailed).			

The obtained Pearson correlation coefficient of 0.577 indicates a moderately strong positive linear relationship between perceptions of borderline security infrastructure and perceptions of national security. The statistically significant correlation ($p = 0.000$) at the 0.01 level (2-tailed) suggests that as perceptions of the security infrastructure along the border increase or decrease, there is a corresponding positive or negative impact on perceptions of national security in both Namibia and Angola.

4.3.2 Correlation analysis: Influence of factors on security infrastructure effectiveness

This section investigates the relationship between perceptions related to funding, personnel and technology of the security infrastructure and their influence on the perceived effectiveness of the security measures.

Table 14: Correlations Table for Influence of Factors on Security Infrastructure

Correlations			
		Perceptions of Funding, Personnel and Technology of Security Infrastructure	Effectiveness of Security Infrastructure
Perceptions of Funding, Personnel and Technology of Security Infrastructure	Pearson Correlation	1	.399**
	Sig. (2-tailed)		.000
	N	118	118
Effectiveness of Security Infrastructure	Pearson Correlation	.399**	1
	Sig. (2-tailed)	.000	
	N	118	118
**. Correlation is significant at the 0.01 level (2-tailed).			

The Pearson correlation coefficient of 0.399 suggests a moderate positive linear relationship between perceptions of funding, personnel and technology aspects of the security infrastructure and the perceived effectiveness of the security measures. The observed statistically significant correlation ($p = 0.000$) at the 0.01 level (2-tailed) indicates that perceptions regarding funding, adequately trained personnel and updated technology are associated with variations in the perceived effectiveness of the security infrastructure. This finding suggests that the efficacy or deficiencies in funding, personnel training and technological advancements might impacting how the security

infrastructure is perceived in terms of effectiveness in handling border security concerns.

4.4 Chapter summary

This chapter presented a detailed analysis of the survey results by examining perceptions of 118 border security professionals on the Namibia and Angola boundary infrastructure and associated national security impacts. The chapter also tested two central hypotheses regarding the influence of border security infrastructures on national security and factors affecting the perceived effectiveness of such installations. Statistically significant positive correlations lend support to both hypothesised associations. The following chapter discusses the findings of the results obtained through the survey.

CHAPTER FIVE

DISCUSSIONS OF FINDINGS

5.1 Introduction

The previous chapter presented the findings of the study. This chapter discusses these findings. The purpose of this study was to assess the effectiveness of the current border management strategies and address their impact on national security, using the borderline between Namibia and Angola. The discussions of the findings are guided by research objectives:

- i. To analyse the challenges of the borderline security infrastructures, the magnitude of illegal border crossings and smuggling of illicit goods between the Namibian and Angolan borders;
- ii. To evaluate the extent of threat (s) that the current borderline's security infrastructure pose to national security in Namibia;
- iii. To determine strategies of minimising illegal border activities between Namibia and Angola borders; and
- iv. To conduct a comprehensive assessment of the current structural integrity of the Namibia and Angola border line and propose recommendations for improvement.

5.2 Biographical information of respondents

The biographical results reveal that most participants were male police officers aged 36-55 years old with over 15 years of experience. This shows that males, often with law enforcement or military backgrounds, predominantly hold border security roles. The high proportion of seasoned professionals could allow greater credibility regarding assessments of border threats and security strategies. However, the noticeable underrepresentation of other groups like customs, immigration and veterinary officers indicates room for more inclusive participation across all border

agencies in future assessments. A more holistic evaluation drawing perspectives from diverse stakeholders can help to enrich the discourse through identifying areas of consensus and divergence across different groups.

5.3 Threats to national security

The prevalent doubts over current border security efficacy echo authors like Nembwaya (2021) and Kambowe (2017), who criticised measures along the Namibia and Angola border as inadequate. The strong consensus on resource constraints hindering border control align with arguments by UNODC (2018), Otuoma, and Okal (2021) over funding deficiencies that are undermining efficacy. This suggests an imperative need to enhance budgetary support to border forces for aspects like surveillance systems upgrades, communication devices, rapid response vehicles and such capabilities augmentation to enable responsive threat deterrence. Regional bodies like the African Union and the South African Development Community through specialised funding schemes can potentially assist individual countries like Namibia and Angola to overcome fiscal shortfalls for border fortification initiatives.

The overwhelming agreement regarding increased interagency collaboration matches study findings by Amupanda (2021) and Wessels (2017) over enhanced cooperation being pivotal to address threats. This signals the necessity for formalised structures for promoting intelligence sharing, joint patrols and community engagement channels across various agencies from both nations. Bilateral bodies such as the Namibia-Angola Permanent Joint Commission on Defence and Security must focus efforts on formulating Standard Operating Procedures, unifying databases, streamlining cross-notifications and response coordination workflows.

The recognition of training and technology benefits concur with conclusions by Akinyemi (2019) and Tekleab et al. (2019), on their potential to bolster border security.

This directs attention to the establishment of regular refresher courses and simulation-based skills development modules customised for border area contingencies to continually augment force preparedness. It also suggests exploring appropriate technologies like night-vision, predictive analytics for threat forecasting and biometrics-enabled identity management systems that align with regional realities in sub-Saharan Africa. Foreign partnerships with nations using frontier technologies for border monitoring could enable knowledge transfers for localised innovation tailored to the specific Namibia-Angola boundary landscape.

The acute concerns over rising illegal activities support trends noted by de Klerk (2021) and align with apprehensions raised by the *Namibia Sun* (2017) over associated risks to societal stability. This underscores the exigency of an ethos shift from reactive round-up approaches towards proactive threat forecasting and community-engaged deterrence strategies as sustainable measures to curb the growth of cross-border illegal activities. Sensitising border area residents regarding risks, cultivating informer networks and incentivising legitimate informal border trade can help foster grassroots level changes that are pivotal in disrupting the ecosystem fuelling border crimes.

5.4 Illegal border crossings and smuggling activities

The increase in illegal crossings has been observed over a four-year period and it is attributed to economic factors as identified in research by Bruwer (2020) and Amupanda (2021). This directs attention to redressing regional economic imbalances that are incentivising such activities, thus facilitating mechanisms, which are enabling legitimate channels for income generation. Cross-border special economic zones with relaxed trade and employment norms can allow border communities to gain through lawful means rather than risky unlawful attempts.

The identification of drugs as most of the smuggled contraband aligns with global illicit drug trade trends as highlighted by UNODC (2018). With Namibia and Angola borders becoming a growing conduit for worldwide drug traffickers, a coordinated regional response is imperative. Global bodies like the UNODC along with the AU can collaborate with national agencies from Namibia, Angola and neighbouring nations like Zambia and Botswana to formulate integrated narcotics trafficking mitigation frameworks. These must focus on strengthening supply-side actions like crop substitution programmes in drug source nations and demand focused efforts like addiction rehabilitation support structures in destination countries.

Several studies, including Bélanger and Schimmelfennig (2021), Bello and Olutola (2022), Malatji (2020), and Mamokhere and Chauke (2020), echo the concern that insufficient measures are fuelling illegal activities due to porous borders. This suggests a two-pronged approach with efforts to enhance security infrastructure as well as border community empowerment for threat monitoring. Aspects like periodic conditional direct cash transfers to border villages for surveillance information, recruiting youth as vigilance volunteers and rewarding local informers for assisting with seizures can help to foster grassroots level vigilance. In parallel, expanding monitoring facilities like radar systems, mobile response checkpoints and incentivising security personnel with performance metrics aligned to border protection goals can bolster control.

Moreover, the moderately positive appraisal of interagency collaboration differs partially from the detriments noted by Amupanda (2021). While acknowledging scope for further improvements, this indicates gradual progress through recent initiatives. Regional bodies must capitalise on these gains by fostering more joint programmes between Namibia and Angola such as border area development projects linking border

guard skills exchange modules to further nurture trust and cooperation, which are vital for security.

The support for heightened penalties matches proposals by Soon and Manning (2018) over stricter punitive actions as a deterrence measure. By imposing banking, travel restrictions on offenders, publishing seizure data for transparency, mandatory community service mechanisms targeting kingpins' assets through stricter Anti-Money Laundering laws and the equilibrium of risk-reward trade-offs fuelling the ecosystem underlying such activities can potentially shift over the longer-term.

The lack of confidence in current penalties concur with Chibira (2021), noting the sentencing flaws enabling illicit activities. This suggests examining successful global models like the 'Certain Unlawful Activities Confiscation Act' in Australia empowering court-monitored proceeds freezing to economically debilitate that organised smuggling syndicates. Tailoring elements from such legislations to strengthen prosecutorial capacities for countering cross-border economic offenses can act as force multipliers for Namibian agencies against entrenched trafficking networks.

5.5 Strategies for minimising illegal border activities

The regression analysis identified collaboration between agencies as most significantly influencing perceived strategy efficacy. This substantiates arguments made by Carter and Poast (2017) over enhanced cooperation being pivotal for success. The qualitative sentiments favouring technology adoption and training programmes align with conclusions by Tekleab et al. (2019) and Granelli (2020) in terms of their potential benefits. However, possible limitations highlighted by Akinyemi (2019) and David (2021) regarding practical challenges must be considered when evaluating such measures.

While acknowledgements regarding gradual improvements in coordination echo scholar Bewiadzi (2022)'s observations from Joint Border Post initiatives between nations like Ghana and Togo, the overall model only accounted for 17.5% of variance. This indicates that there are other unidentified factors substantially affecting perceived efficacy. Examples include bureaucratic procedures and a lack of information sharing between various agencies. Dismantling such obstacles through appropriate structural and policy reforms are, therefore, imperative to actualise the benefits of collaboration. Without addressing these impediments, interagency partnerships risk remaining cosmetic arrangements that are unable to fulfil their intended security augmentation objectives.

Additionally, the variations in the border terrain should be considered when designing technology and training programmes for border security. This includes things like seasonal flooding, wildlife movement patterns and their impact on security. Bhutan's "green militarisation" approach towards ecological protection-oriented border security modernisation can offer valuable lessons for sustainability-centred reforms (Woodworth, 2022).

Thus, a contextualised approach factoring environmental conservation, community needs and cultural sensitivities along with control enhancement goals is vital for well-rounded border modernisation pathways. Beyond examining efficacy through a narrow security prism, holistic border area development joining security, eco-sensitivity, livelihood generation and ethnic inclusivity merit consideration within reform initiatives for lasting impact.

5.6 Border line structural integrity

The statistical tests revealed no significant differences between positions regarding perceptions of current borderline structural integrity. This suggests a degree of

consensus across different agencies about existing structural conditions. But taken alongside the acute security threat concerns, it also implies a convergence of opinions over the inadequacy of the status quo infrastructure. As noted by de Klerk (2021) and Kambowe (2017), deficiencies in aspects like fencing and surveillance measures continue to undermine control efforts.

Therefore, while aggregate perceptions indicate fundamental infrastructure gaps irrespective of specific professional standpoints, granular insights evaluating suitability against latest threat profiles can offer crucial pointers on critical upgradation needs. For instance, immigration officials interfacing more frequently with illegal economic migrant groups can shed light on movement hotspots requiring prompt reinforcements like mobile patrols and temporary checkpoints. Customs officers in turn might guide investments towards logistic inspection technologies like container scanners based on changing smuggling *modus operandi*.

Thus, beyond high-level unanimous views on general deficiencies, the inclusion of micro-level perspectives accounting for ground realities can inform nuanced and need-based strategic infrastructure building. As highlighted by Mpakaniye (2021), Namibia must also consider emulating successful technology-powered Integrated Border Management architectures implemented between nations like Rwanda-Tanzania for proactive threat response capacity.

Overall, the current study reveals that border modernisation remains a widely acknowledged imperative yet differing contexts highlight varied facets like economic disparities, with ecological factors also shaping illegal activities. This directs a multidimensional policy approach aligning security goals with sustainable development. The study underscores how border issues intersect complex societal challenges. Holistic and contextualised strategies joining stakeholder inputs can

potentiate responsive reforms. Namibia and Angola have a foundation for cooperation building on historical solidarity. Channelling this friendliness towards addressing shared border concerns can pioneer synergistic bilateral partnerships for securing collective futures.

5.7 Hypotheses discussions

5.7.1 Impact of border line security infrastructure on national security

The moderately strong positive correlation between infrastructure perceptions and national security aligns with arguments made by Minnaar (2022) and Mayer (2017) over the efficacy of security barriers in reducing threats. This linkage is also consistent with the enthusiastic embrace for surveillance technologies and physical reinforcements observed across participants inclusive of security forces personnel operating at borders. Their confidence over such measures affirms notions regarding border fortification structures for mitigating risks.

However, this supposed effectiveness contradicts conclusions by Bruwer (2020) and von Lampe (2019), questioning the utility against ingenious unlawful attempts often circumventing such deterrents through underground tunnels, vessel-based concealment techniques and other adaptive strategies. The schizophrenic outlook between affirmative police perceptions versus scholarly scepticism directs attention to context-sensitive evaluations. The terrain, demographics, cultural attitudes and socioeconomic compulsions incentivising illegal activities in a specific boundary region should inform suitable deterrence mechanisms.

Namibia must balance hard security approaches with soft-power community-building initiatives to sustainably de-motivate unlawful attempts. For instance, special border area development zones facilitating lawful trade, free movement and incentives for

legitimate enterprises can dissuade economically driven crimes without antagonising border communities through aggressive policing alone. Thus, an appropriate blend of tactical infrastructure upgrades aligned with economic empowerment programmes for fostering stake holding at grassroot levels is imperative for durable remedies.

5.7.2 Influence of factors on security infrastructure effectiveness

The positive correlation between perceptions of funding, personnel, technology and effectiveness substantiates research by UNODC (2018), Otuoma and Okal (2021) and AUC (2018), thus highlighting them as crucial determinants of efficacy. This reinforces arguments regarding priorities for enhancing border control measures. However, qualitative insights also remind us that solely increasing resource allocation cannot guarantee effectiveness without a thoughtful strategy. The excessive enthusiasm over sophisticated gadgetry observed among respondents risks over reliance on technology, thus underestimating critical human intelligence gathering and interpretation skills. Maintaining optimal human-machine calibration is imperative for maximising returns on technological investments.

Additionally, sustainability considerations regarding energy and environmental footprint merits deliberation while pursuing security infrastructure upgrades. Namibia's extensive solar energy potential offers avenues for powering surveillance systems through renewable sources instead of polluting diesel generators. Exploring such green options aligning with ecological preservation goals alongside security can set progressive precedents. Creative community partnership models like wildlife conservation informer networks and youth volunteer groups can foster participatory monitoring and devolving centralised border patrolling burdens. Thus, factoring environmental and community needs while boosting control infrastructure can

potentiate socially harmonious and ecologically prudent border management pathways for the 21st century.

5.8 Chapter summary

The discussions reviewed results on the biographical attributes of respondents, threat assessments, and perspectives on illegal activities, strategy efficacy evaluations and structural integrity analyses. Key findings were contextualised in relation to arguments and conclusions of previous scholarly literature for deeper interpretation. Moving forward, chapter six conclude the thesis by presenting a summary of key inferences, recommendations emerging from the study and areas identified for future research to advance discourses over fortifying the Namibia and Angola boundary.

CHAPTER SIX

IMPLICATIONS OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This chapter presents the implications of findings of the study, conclusions and recommendations derived from the analysis conducted on the Namibia-Angola borderline security infrastructure and its impact on national security. It highlights an overall implication of the study; key findings aligned to each research objective and relates the conclusions back to the empirical results and literature discussed. Additionally, it puts forth practical recommendations for enhancing border control and identifies areas requiring further academic examination to advance scholarship on this topic.

6.2 Implications

The study aimed to assess the effectiveness of the current border management strategies and how it affected the national security, using the borderline of Namibia and Angola. The research was guided by four specific objectives designed to address this central aim. Findings revealed significant challenges, notably the expansive and geographically complex terrain, poor coordination amongst border security agencies, inherent porosity of the border and resource constraints that impede effective surveillance and patrol. These factors contributed to the high levels of unauthorised border crossings and illicit trafficking of goods along the border.

6.3 Study conclusions

The first objective focused on challenges of the borderline security infrastructures, the magnitude of illegal border crossings and smuggling of illicit goods between the Namibian and Angolan borders. The results revealed acute consensus regarding escalating risks from uncontrolled illicit activities due to inadequacies such as limited

surveillance systems, lack of manned outposts along unfenced zones and insufficient rapid response capacities. This leads to the overwhelming support for technology adoption and interagency coordination.

The second objective aimed to evaluate the extent of threat (s) that the current borderline's security infrastructure poses to national security in Namibia. The results indicated a perceived surge in these activities, predominantly motivated by economic considerations. These suggested employment of investments into aspects like aerial surveillance emerged as significant for plugging infrastructure gaps along the largely unfenced and porous boundary

The third objective focused on evaluating and suggesting strategies to combat illegal border activities. Empirical analyses and scholarly assessments converge on the imperative of enhanced interagency collaboration as a foundational prerequisite for successful border management. Specifically, the establishment of integrated one-stop border posts as a mechanism to facilitate effective coordinated border management, thereby streamlining procedural workflows for both travellers and cargo.

The fourth objective pursued the comprehensive structural integrity assessment of the borderline. The statistical analysis showed agreement among agencies about shortcomings in the current fortifications, but there were no significant differences based on specific professional viewpoints. This emphasises the need for a comprehensive approach that includes detailed information from ground officials about the latest patterns of innovative threats. This approach will help in customising reinforcements that are in tune with emerging methods.

The two central hypotheses of this study explored the influence of border security infrastructure on national security and factors affecting the perceived effectiveness of such infrastructure.

Hypothesis 1: The hypothesis stating that the Namibian and Angolan border line security infrastructure has had a positive impact on national security. It was supported based on the statistically significant moderate positive correlation obtained between infrastructure perceptions and national security. However, scholarly perspectives also highlighted limitations of overt security architectures against adaptive unlawful attempts circumventing deterrents. This directs a balanced approach blending tactical upgrades with community participation for holistic security.

Hypothesis 2: The hypothesis examining the relationship between funding, personnel, technology and perceived effectiveness was also substantiated with a significant positive correlation aligning with past research. However, solely increasing inputs without addressing procedural bottlenecks risks sub-optimal returns, thereby necessitating accompanying process reforms for the actualisation of security objectives set forth.

Thus, while the quantitative assessments provide overall support for the postulated associations, the discussions also display the intricacies involved. Intentional policy initiatives coalescing appropriate security architecture alignments, grassroots empowerment and legislative overhauls enabling agile response mobilisation across a shared frontier can pioneer bilateral partnerships that make strategic security infrastructure live up to its conceptual premises for collective advancement.

6.4 Recommendations

6.4.1 Recommendations for practice

Considering the threats of rising cross-border crimes and the consensus on the need for grassroots community participation, it is recommended that:

- Constitute a joint Namibia and Angola border area development committee between the Ministry of Home Affairs, Immigration, Safety and Security in Namibia and the Ministry of Interior in Angola to formulate integrated village upliftment schemes. These schemes must channel a percentage of the national security budgets over five (5) years towards roads, healthcare access, clean water projects, renewable electrification initiatives, vocational training centres and such other aspects. This will incentivise border communities' stakes within legitimate economies, thereby contributing to threat reduction.
- Standard Operating Procedures for streamlined data sharing must be instituted between the Immigration Departments, Customs Agencies and Police Forces of both nations. This must be enabled through integrated information systems, thus allowing the seamless exchange of intelligence inputs, profiles and biometrics between databases. It will augment interagency collaboration to translate grassroots level data into actionable responses for augmenting border control.

Considering the vast unfenced terrain and potential for community participation, it is vital that:

- The youth in border villages be recruited and provided with specialised training to serve as community vigilance volunteers. Incentive schemes involving periodic cash transfers for surveillance inputs and priority access to socioeconomic schemes can facilitate threat monitoring by leveraging grassroots networks. This is essential given their familiarity with the porous borderline terrain and the potential to bridge information gaps.

- Investments should be directed towards expanding aerial surveillance infrastructure such as solar-powered camera grids, supported by predictive analytics systems. This will enable context-aware real-time response mobilisation that is attuned to the dynamic boundary landscape. Preferential budgetary allocations must fund such initiatives for addressing current deficiencies.

6.4.2 Recommendations for further research

- *Studies assessing the potential of special border economic zones along borders with unique trade rules to better integrate border communities into legal economic activities*

This recommendation stems from the recognition that economic development is intricately linked to border security. Special border economic zones could provide a structured platform for cross-border trade and cooperation, thereby fostering economic growth on both sides. By studying the viability of such zones, it becomes possible to understand how economic incentives can contribute to improved security. Additionally, differentiated trade norms can ensure that the economic benefits are balanced and mutually beneficial, thereby reducing the likelihood of illicit activities along the border.

- *Studies examining the ecological impacts of border security fortification actions and sustainable pathways aligning conservation needs with control imperatives*

The physical fortification of borders can have unintended consequences on the environment and understanding these impacts is crucial for adopting sustainable practices. By studying the ecological implications, the research will aim to find a balance between enforcing security measures and preserving the natural environment.

This holistic approach recognises that border security should not come at the expense of environmental degradation and seek to identify sustainable pathways that align with both conservation needs and control imperatives.

- ***Reviewing gender dimensions within border security roles and policies promoting greater inclusion of women as border forces personnel***

This recommendation recognises the importance of gender inclusivity in security forces, which can enhance overall effectiveness. By studying the gender dimensions within border security roles, the research aims to identify areas where women can play a more active and integrated role. Greater inclusion of women in border forces not only contributes to diversity but can also bring unique perspectives and skills to security operations. Understanding the gender dynamics is crucial for developing policies that promote equality and that can harness the full potential of the workforce.

6.5 Chapter summary

This chapter aimed to conclude the research study. All the objectives was been achieved based on the findings. The study objectives focused on evaluating the extent of threats to national security, analysing the magnitude of illegal border crossings and determining strategies to minimise illegal border activities. Conclusions had been made based on data analysis and findings presented in the previous chapter. This chapter has also provided recommendations and areas for further research.

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APPENDICES

APPENDIX A: ETHICAL CLEARANCE CERTIFICATE



ETHICAL CLEARANCE CERTIFICATE

Ethical Clearance Reference Number: SOS-0128 Date: 24 February 2023

This Ethical Clearance Certificate is issued by the University of Namibia Ethics Committee (REC) in accordance with the University of Namibia's Research Ethics Policy and Guidelines. Ethical approval is given in respect of undertakings contained in the Research Project outlined below. This Certificate is issued on the recommendations of the ethical evaluation done by the ethics committee.

Title of Project: AN ANALYSIS ON THE NAMIBIA - ANGOLA BORDER LINE SECURITY INFRASTRUCTURE AND ITS IMPACT FOR NATIONAL SECURITY

Student: HILENI AMADHILA

Student Number: 201211126

Supervisor(s): Dr. NICASIUS A. CHECK
Mr. JOHN S. ANGHUWO

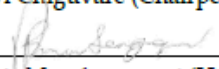
Centre for Research Services

Take note of the following:

1. Any significant changes in the conditions or undertakings outlined in the approved Proposal must be communicated to the ethics committee. An application to make amendments may be necessary.
2. Any breaches of ethical undertakings or practices that have an impact on ethical conduct of the research must be reported to the ethics committee.
3. The Principal Researcher must report issues of ethical compliance to the ethics committee (through the Chairperson) at the end of the Project or as may be requested by the ethics committee.
4. The ethics committee retains the right to:
 - i) Withdraw or amend this Ethical Clearance if any unethical practices (as outlined in the Research Ethics Policy) have been detected or suspected,
 - ii) Request for an ethical compliance report at any point during the course of the research.

The ethics committee wishes you the best in your research.


Dr. Zivayi Chiguvare (Chairperson Ethics Committee)


Prof. Davis Mumbengegwi (Head, Multidisciplinary Research)

APPENDIX B: RESEARCH PERMISSION LETTER

CENTRE FOR RESEARCH SERVICES

Office of the Pro-Vice Chancellor: Research, Innovation & Development

University of Namibia, Private Bag 13301, Windhoek, Namibia

340 Mandume Ndemufayo Avenue, Pioneers Park, Office F223 - Block, Second Floor

☎ +264 61 206 4673; E-mail: kmbulu@unam.na; URL: <http://www.unam.edu.na>



RESEARCH PERMISSION LETTER

Date: 04/04/2023

Student Name: HILENI AMADHILA

Student Number: 201211126

Programme: Masters of Arts in Security and Strategic Studies

Approved Research Title: AN ANALYSIS ON THE NAMIBIA - ANGOLA BORDER LINE SECURITY INFRASTRUCTURE AND ITS IMPACT FOR NATIONAL SECURITY

TO WHOM IT MAY CONCERN:

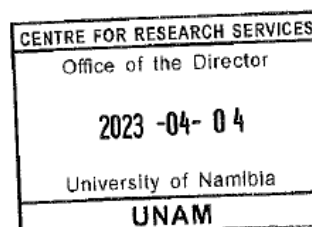
I hereby confirm that the above-mentioned student is registered at the University of Namibia for the programme indicated. The proposed study met all the requirements as stipulated in the University guidelines and has been approved by the relevant committees.

The proposal adheres to ethical principles as per attached Ethical Clearance Certificate. Permission is hereby granted to carry out the research as described in the approved proposal.

Best Regards

A handwritten signature in black ink, appearing to read 'AEE Shikongo', is written over a horizontal line.

Dr. AEE Shikongo
Head: Postgraduate Research Support Services
Tel: +264 61 206 3129
E-mail: aeshikongo@unam.na



APPENDIX C: LETTER OF AUTHORISATION BY NCRST



AUTHORIZATION OF RESEARCH PROJECTS

Authorization is hereby granted in terms of Section 21 of the RST Act No. 23 of 2004, to:

Name: University of Namibia

Address: Private Bag 13301, Pioneers Park,
Windhoek

Coworkers: Hileni Amadhila

Certificate Number (if applicable): RCIV00022018

Authorization No: 202306014

Type of Research:

Non- Commercial research and the use of resources be limited to what is in the proposal.

Title of Research Authorized:

An Analysis on the Namibia – Angola Border Line Security Infrastructure and its Impact for National Security.

Locality:

Oshikango Border Post, Omuvelo wa Kasamane Border Post, Omahenene Border Post and Ruacana Border Post.

Duration: 20 June 2023 - 30 June 2024

Research/ Sample Collection Conditions:

Refer to research conditions on the next page.

Yours sincerely,

Prof. Anicia Peters

Chief Executive Officer



Head Office:

☐ Cnr. Louis Raymond & Grant Webster Street
Olympia, Windhoek ☎ +264 61 431 7000 🌐 www.ncrst.na
☐ Private Bag 13253, Windhoek ☎ +264 61 216 531 ✉ info@ncrst.na
📱 Ncrst 📧 @NCRST_Namibia 📺 @ncrst.na

Innovation Hub:

☐ Cnr Louis Raymond & Grant Webster Street Olympia
Windhoek ☎ +264 61 431 7000
☐ +264 61 235 796

RESEARCH/SAMPLE COLLECTION CONDITIONS

1. The data collected should only be used for the purpose outlined in research proposal.
2. The applicant should share the final results of the study with the Ministry of Home Affairs, Immigration, Safety and Security, and National Commission on Science, Research and Technology (NCRST).
3. The authorization letter is renewable. The applicant should submit the application for renewal three months before the expiring date.

APPENDIX D: LETTER FROM EMPLOYER



REPUBLIC OF NAMIBIA

MINISTRY OF HOME AFFAIRS, IMMIGRATION, SAFETY AND SECURITY

Ministerial Head Quarters
Private Bag 13200
Windhoek

Tel: (061) 2922111
Fax: (061) 2922185

ENQUIRIES: Ms. S. Shapaka
Ext. 2036 | Cellphone: 0813082077 | E-mail Address: Selma.Shapaka@mha.gov.na

Our Ref.: S/5/1/1

Human Resources Matters/Confidential

Ms. Hileni Amadhila
201211126
Windhoek

Dear Ms. Amadhila

SUBJECT: DATA COLLECTION FOR RESEARCH PURPOSES AT THE MINISTRY OF HOME AFFAIRS, IMMIGRATION, SAFETY AND SECURITY

1. I hereby acknowledge receipt of your letter dated 23 June 2023 on the above subject matter.
2. Permission is granted for you to do research in the Ministry from the period 10 July 2023 to 21 July 2023.
3. Please note that the information collected will only be used for the academic purpose and the findings should be shared with the Ministry.
4. For any enquiries do not hesitate to contact Ms. Selma Shapaka, Learning and Development Officer at 0819510111 or Selma.Shapaka@mha.gov.na

Yours Sincerely


ETIENNE MARITZ
EXECUTIVE DIRECTOR



APPENDIX E: LANGUAGE EDITING REPORT

ACET Consultancy

Anenyasha Communication, Editing and Training

Box 50453 Bachbrecht, Windhoek, Namibia

Cell: +264814218613

Email: mlambons@yahoo.co.uk

9 June 2024

To whom it may concern

LANGUAGE EDITING – HILENI AMADHILA

This letter serves to confirm that a MASTER OF ARTS IN SECURITY AND STRATEGIC STUDIES research titled AN ANALYSIS ON THE NAMIBIA-ANGOLA BORDER LINE SECURITY INFRASTRUCTURE AND ITS IMPACT ON NATIONAL SECURITY, was submitted to me for language editing.

The research was professionally edited, and track changes and suggestions were made in the document. The research content or the author's intentions were not altered during the editing process and the author has the authority to accept or reject my suggestions.

Yours faithfully



PROF. (DR) NELSON MLAMBO

PhD in English

M.A. in Intercultural Communication

M.A. in English

B. A. Special Honours in English – First class

B. A. in English & Linguistics

APPENDIX F: QUESTIONNAIRE

Dear Participant,

My name is Hileni Amadhila a Master's student at the Namibia Business School of the University of Namibia. As part of the requirements to complete the degree, we are required to conduct a research thesis in alignment with our field of specialisation. To this end, I pursuing research titled: **AN ANALYSIS ON THE NAMIBIA – ANGOLA BORDER LINE SECURITY INFRASTRUCTURE AND ITS IMPACT FOR NATIONAL SECURITY.**

I would like to invite you to participate in the research study that aims to evaluate the current state of border security between Namibia and Angola. Your participation is voluntary and anonymous and your responses will be used for research purposes only. You have the right to decline participation or withdraw at any point during the survey without penalty.

Please answer the questions to the best of your knowledge and experience. The survey will take approximately 20-30 minutes to complete.

Section A: Biographical Information

Instruction: Mark the Appropriate response with an “X”

1. Age

18-25 years old	
26-35 years old	
36-45 years old	
46-55 years old	
56 years old and above	

2. Gender

Male	
Female	
Other	

3. Education Level:

Primary school	
High school	
Diploma	
Bachelor's degree	
Master's degree or higher	

4. Years of experience in the security field:

Less than 2 years	
2-5 years	
6-10 years	
11-15 years	
More than 15 years	

Section B: Threats to National Security

Please rate your level of agreement or disagreement with the following statements:

Statement	Strongly Disagree	Disagree	Neither agree nor disagree	Strongly Agree	Strongly Disagree
The current border security measures are adequate to prevent threats to national security.					
The current border security measures are					

effective in deterring criminal activity.					
The current border security measures have been successful in reducing illegal border crossings.					
The lack of resources allocated to border security has hindered the effectiveness of border control.					
There is a need for increased collaboration between different security agencies to improve border security.					
The lack of training for security personnel has contributed to ineffective border control.					
The use of technology such as drones and cameras can enhance border security.					
The increase in illegal border activities poses a significant threat to national security.					

Section C: Number and Types of Illegal Crossings and Illicit Goods

Please rate your level of agreement or disagreement with the following statements:

Statement	Strongly Disagree	Disagree		Neither agree nor disagree	Strongly Agree	Strongly Disagree

There has been a significant increase in the number of illegal border crossings over the past four years.						
The majority of illegal border crossings are made by individuals seeking better economic opportunities.						
The majority of illicit goods smuggled across the border are drugs.						
The lack of border security measures has contributed to the increase in illegal activities.						
The collaboration between different security agencies has improved the detection of illegal activities.						
The government should increase penalties for individuals involved in illegal border activities.						
The current penalties for illegal activities at the						

border are sufficient.						
The government should prioritize the prevention of illegal border activities as a national security issue.						

Section D: Current Strategies and Proposed Solutions

Please rate your level of agreement or disagreement with the following statements:

Statement	Strongly Disagree	Disagree	Neither agree nor disagree	Strongly Agree	Strongly Disagree
The current strategies used to combat illegal border activities are effective.					
The use of technology such as drones and cameras can enhance border security and reduce illegal activities.					
The government should increase funding for border security to improve border control.					
There is a need for increased collaboration between different security agencies to improve border security.					
The current security measures in place are					

sufficient to prevent illegal border activities.					
I believe that improved border infrastructure will help reduce illegal activities.					
I believe that penalties for engaging in illegal border activities are too harsh.					
The government should establish more checkpoints along the Namibia-Angola border.					
The government should provide more training to security personnel to better equip them to handle illegal activities.					

Section E: The current structural integrity of the Namibia-Angola borderline and recommendations for improvement

Statement	Strongly Disagree	Disagree	Neither agree nor disagree	Strongly Agree	Strongly Disagree
The current border infrastructure is effective in preventing illegal activities.					
I believe that the current border infrastructure is outdated and needs to be updated.					
The government should invest more in border					

infrastructure to better monitor the border.					
The community should be involved in the maintenance and monitoring of the border.					
The government should provide more training to border security personnel to better equip them to handle illegal activities.					
The government should establish a hotline for reporting issues with border infrastructure.					
The government should increase penalties for those caught damaging or destroying border infrastructure.					
The government should establish a reward system for those who report issues with border infrastructure.					

Section F: Hypothesis 1 - The Namibia-Angola border line security infrastructure has had a positive impact on national security in both countries.

Statement	Strongly Disagree	Disagree	Neither agree nor disagree	Strongly Agree	Strongly Disagree
The current security infrastructure has led to a decrease in the number of illegal border crossings and illicit goods smuggled					

across the Namibia-Angola border.					
The security infrastructure has increased the confidence of citizens in the government's ability to ensure national security.					
The presence of security infrastructure has discouraged criminals from engaging in illegal activities along the border.					
The security infrastructure has led to improved communication and coordination among security agencies in both countries.					
The security infrastructure has deterred the entry of foreign terrorist organisations into Namibia and Angola.					

Section G: Hypothesis 2 - The effectiveness of the security infrastructure is influenced by factors such as funding, personnel and technology.

Statement	Strongly Disagree	Disagree	Neither agree nor disagree	Strongly Agree	Strongly Disagree
Insufficient funding has negatively affected the effectiveness of the security infrastructure.					
The lack of adequately trained personnel has contributed to the					

inefficiency of the security infrastructure.					
The outdated technology used in the security infrastructure has limited its effectiveness.					
The complex and rugged terrain of the border region makes it difficult to monitor and patrol effectively.					
Political instability in neighbouring countries has hampered efforts to improve the security infrastructure.					

Thank You for Your Participation