Counterfeit pharmaceutical products in South Africa: a criminological examination

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Submitted in fulfilment of the requirements for the degree of Doctor of Philosophy (PhD) in Criminology and Forensic Studies, University of KwaZulu-Natal, Howard College Campus, Durban, South Africa

Declaration

Submitted in fulfilment of the requirements for the degree of Doctor of Philosophy in Criminology and Forensic Studies

University of KwaZulu-Natal, Durban,

South Africa.

I, **Trevonia Nihal (Student Number: 213503014)**, declare that,

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As the candidate's supervisor, I approve this thesis for submission.

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Dedication of the Study

This study is dedicated to all the people of the Republic of South Africa, with special attention to those individuals who have been adversely affected by counterfeit pharmaceutical products.

Acknowledgements

Personally, the journey of this doctoral degree proved to be one that was rather lonely, not only due to its general nature and magnitude but because of the effects of the COVID-19 pandemic. Nevertheless, the completion of this study would not have been possible without the collaborative efforts of several individuals. I wish to extend my gratitude and appreciation to the following who made it possible for this study to be completed:

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My parents, Patrick and Prissie, for constantly giving me the strength to progress throughout this study. My appreciation for their everlasting encouragement, love, support, motivation and care cannot be overstated.

To my grandparents, while you may not be here physically, all of my achievements thus far are a result of the dreams you allowed me to have as a little girl, all of which I hope to achieve by the time we meet again.

Abstract

This study focused on the criminological examination of counterfeit pharmaceutical products in South Africa. The researcher proposed six objectives for this study, and they are as follows: to determine the extent of counterfeit pharmaceutical products being produced in South Africa; to examine how South African police officers are trained to detect counterfeit pharmaceutical products; to examine and investigate the legislature that South Africa has in place to deal with counterfeit crime; to investigate how the internet facilitates criminal organizations that deal in counterfeit pharmaceutical products; to determine the factors that contribute to the influx of counterfeit pharmaceutical products in South Africa; and to investigate the public health interventions that South Africa has in place to protect citizens against counterfeit pharmaceutical products. The researcher utilized the rational choice theory and the general strain theory as the theoretical underpinning of this study to explain the phenomenon of counterfeit pharmaceutical products in South Africa. These theories proved to be relevant as they allowed the researcher to understand and explore the research phenomenon in the context of South Africa, where the study is based. The study employed an exploratory research design and utilized the qualitative research method. The sample size for this study comprised of twenty-five (25) police officers, of whom fourteen were from the Commercial Crime Branch in Prospecton, and eleven (11) were from the Directorate for Priority Crime Investigation (the Hawks) in Durban Central. The researcher used the purposive and snowball sampling technique to select the respondents for the study. The researcher chose these techniques as they proved helpful in selecting those respondents that were most relevant and knowledgeable regarding the topic under study. To gather data, the researcher employed one-on-one semi-structured interviews and utilised an interview schedule of predetermined questions emanating from the existing literature on the phenomenon. The collected data was transcribed and then thematically analyzed to produce an interpretable report. In conducting this study, the researcher adhered to all the ethical considerations as stipulated by the Ethics Committee within the University of Kwa-Zula Natal and obtained permission from the relevant gatekeepers. The researcher informed the respondents that their participation was voluntary and ensured confidentiality and anonymity to each respondent through the informed consent form. Findings: the study finds that counterfeit pharmaceutical products are not necessarily produced in South Africa but are brought into the country as a result of porous borders, scarcity of law enforcement at the borders to prevent counterfeit pharmaceutical products from entering the country, high demand for more affordable pharmaceutical products and the opportunity to financially benefit from the

fear, panic and desperation surrounding sickness as well as the COVID-19 pandemic. The study finds that 60% of the respondents indicated that they received either formal or informal training, with some stating that they received both. The study finds that the legislature surrounding counterfeit crime is limited in that it permits much leniency towards counterfeiters by imposing a fine rather than a term of incarceration for the accused counterfeiter. The study finds that the internet facilitates criminal organisations by allowing counterfeiters to operate anonymously and behind layers of encryption, thus making it challenging for law enforcement to trace and identify them. The study finds that while various factors cause an influx of counterfeit pharmaceutical products in the country, the most contributing factors are unemployment that leads to poverty, demand for affordable pharmaceutical products, profitability, and lenient legislation and its poor enforcement. The study finds that 84% of the respondents were unaware that South Africa has any public health interventions currently to protect citizens against counterfeit pharmaceutical products. Recommendations: The researcher recommends that future researchers research the effects of counterfeit pharmaceuticals on chronic medicine users and the dangers that ingesting it might have on an individual who requires the legitimate version. The researcher recommends to law enforcement that all police officers receive some induction on counterfeit products but with greater focus on products that could result in a fatality, such as counterfeit pharmaceutical products. The researcher recommends that the South African government, together with the relevant role players (such as the Department of Health), implement functioning and effective approaches to create awareness of counterfeit products and pharmaceutical products specifically. The researcher strongly recommends that the community continuously educate themselves on the harms of counterfeit pharmaceuticals and the effects of ingesting substandard medicines on the human body. Under the assumption of providing relief to a medical condition, the consumption of counterfeit pharmaceuticals can result in more illness instead of relief from it. The researcher recommends that individuals visit registered healthcare providers or hospitals to ensure that they receive treatment with medication that is authentic and safe for human usage.

Keywords: counterfeit, counterfeit pharmaceutical products, counterfeiting, counterfeiters, crime

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List of Acronyms

Acronym	Meaning
SAPS	South African Police Services
SAHPRA	South African Health Products Regulatory Authority
TOR	The Onion Ring
UNODC	United Nations Office on Drugs and Crime
WHO	World Health Organization
VPN	Virtual Private Network
IP	Internet Provider
IMPACT	International Medicinal Products and Anti-Counterfeiting Taskforce
OECD	Organization for Economic Co-operation and Development
IFPMA	International Federation of Pharmaceutical Manufacturers and Associations
PSI	Pharmaceutical Security Institute
URL	Uniform Resource Locator
EU	European Union
HIV	Human Immunodeficiency Virus
IPPA	Illicit Pharmaceutical Products in Africa
DPCI	Directorate for Priority Crime Investigation
DTI	Department of Trade and Industry
SARS	South African Revenue Services
GATT	General Agreement on Tariffs and Trade
SACU	Southern African Customs Union
USD	United States Dollar
SABRIC	South African Banking Risk Information Centre
AUC	African Union Commission
MHRA	Medicines and Healthcare Products Regulatory Agency
GBP	Great British Pound
BRICS	Brazil, Russia, India, China, South Africa
ACTA	Anti-Counterfeiting Trade Agreement
COE	Council of Europe
PFIPC	Permanent Forum on International Counterfeit Crime

UPU	Universal Postal Union
WCO	World Customs Organization
NAFDAC	National Agency for Food and Drug Administration and Control
AMA	African Medicines Agency
GST	General Strain Theory
NPA	National Prosecuting Authority
ADR	Alternate Dispute Resolution

CHAPTER 1: GENERAL ORIENTATION

1.1 Introduction

The researcher endeavours to conduct a criminological examination of counterfeit pharmaceutical products in South Africa. The rationale that prompted the researcher to embark on a study of this nature is that there has been a recent and significant increase in the prevalence of counterfeit pharmaceuticals in South Africa. Secondly, research available on this phenomenon in South Africa is minimal, thus prompting the researcher to investigate the phenomenon further. The United Nations Office on Drugs and Crime (UNODC) reports that between 5-7% of the global world trade is attributed to counterfeit pharmaceutical products (UNODC, 2010). The World Health Organisation (WHO) estimated that 10-30% of all pharmaceutical products globally are counterfeit, though this number can increase to 50-70% in some underdeveloped countries (WHO, 2016). In addition, Miller (2020) indicates that of the reports of counterfeit pharmaceutical products reported to WHO between 2013 and 2017, 42% of the reports came from the African continent. In light of the abovementioned statistics and following Miller (2020), this act of criminality is more common in developing countries, such as South Africa, where poverty and the lack of appropriate legislature and law enforcement are the leading factors for counterfeit crime.

The researcher concurs with Yadav and Rawal (2015) that research for this particular crime (counterfeit pharmaceutical crime) should be undertaken as part of a criminological study and through targeted security studies on preventing and managing counterfeit crime. Researchers need to understand better what patterns exist for counterfeiters when counterfeiting pharmaceuticals. The researcher is of the view that research is necessary not only to identify the extent of counterfeit pharmaceutical products in South Africa but also to identify the factors that exacerbate the prevalence of counterfeit pharmaceutical crime and the legislation and public health interventions that are in place to protect South Africa citizens from the harm caused by ingesting and utilizing counterfeit pharmaceutical products.

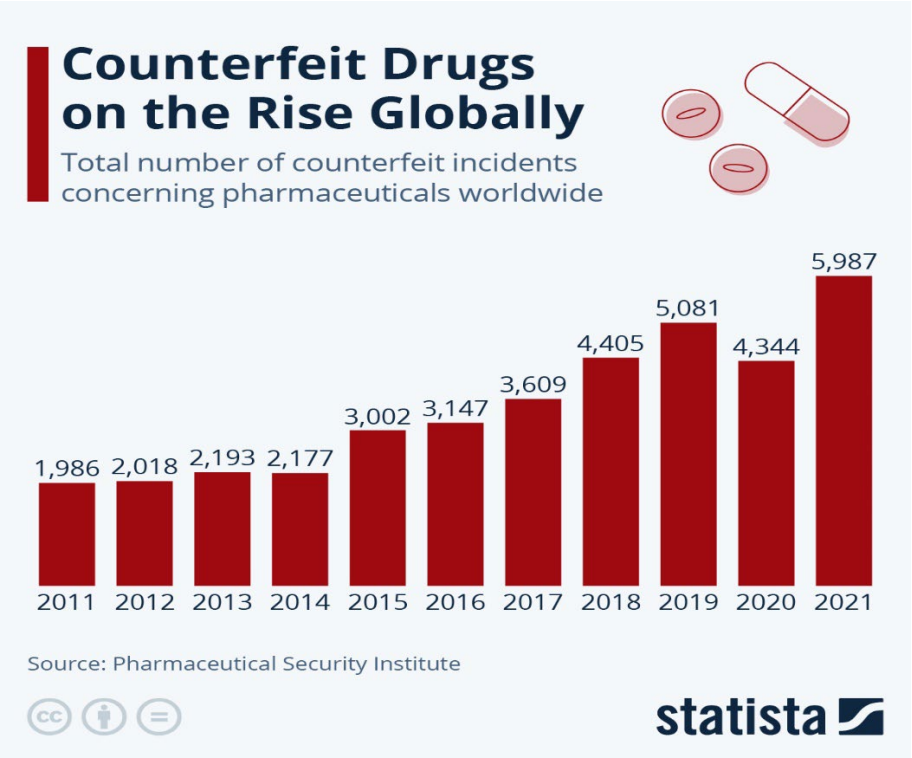
By conducting this study, the researcher seeks to provide insight into the extent of counterfeit pharmaceutical products in South Africa to provide clarity on how police officers are trained to detect counterfeit pharmaceutical products, to highlight the limitations that exist within the current South African legislature on counterfeit crime; to examine how the internet facilitates criminal organizations that deal in counterfeit crime; to investigate the main factors that create easy access to counterfeit pharmaceutical products and to determine the public health

interventions that South Africa has in place to protect its citizens. The researcher has decided to embark on this study as there is limited knowledge on counterfeit pharmaceutical products that presently exist in South Africa, and further knowledge is needed to prevent and manage counterfeit crime currently and in the years to follow.

Little attention has been paid to studying counterfeit crime in South Africa, let alone one counterfeit pharmaceutical crime. Most studies that have been conducted thus far focus on counterfeit pharmaceutical crime in developed, first-world countries such as America and Europe. Less attention has been given to victims and criminals of counterfeit pharmaceutical crime who reside in developing countries such as South Africa, where there are minimal resources to protect individuals from the harms caused by pharmaceutical products that are counterfeit or substandard. By conducting this study, the researcher seeks to contribute to the knowledge of counterfeit pharmaceutical products in South Africa and to narrow the gaps in the existing literature surrounding counterfeit pharmaceutical products. In this introduction chapter, the researcher will highlight some of the gaps and limitations in research, which this study seeks to address.

Researching counterfeit crime and pharmaceutical products will provide the knowledge required for law enforcement to prevent and curb this phenomenon from destroying more lives (UNODC, 2016). Not only will researching counterfeit pharmaceutical products benefit law enforcement and the pharmaceutical sector, but it will also pave the way for future criminologists to prevent a rapidly growing crime in South African society. This study will highlight areas of counterfeit crime that law enforcement must pay more attention to to reduce its occurrence in South Africa. The study will investigate the extent of counterfeit pharmaceutical products in our communities, provide recommendations to law enforcement and criminologists to reduce their prevalence and determine how to decrease the demand for counterfeit pharmaceutical products.

Illustration 1: Global increase in counterfeit pharmaceuticals from 2011 to 2021



Source: Fleck (2023a, online)

In illustration 1 above, the researcher highlights the global increase in counterfeit pharmaceuticals over 11 years. The graph shows a steady increase from 2011 to 2014. Between 2014 and 2015, there was a sudden increase in counterfeit pharmaceuticals globally. The graph depicts a steady increase until 2018 and another sudden surge in 2019. The graph illustrates a drop in the global amount of counterfeit pharmaceuticals in 2020 and a rise in 2021.

According to Perez-y-Soto (2021), the International Chamber of Commerce disclosed that the international trade in counterfeit and pirated products may very well amounted to 509 billion USD in 2016, estimated to be 3,3% of the world trade. The author further reveals that this is an increase from the 461 billion USD in 2013, representing 2,5% of the world trade. The World Health Organisation estimates that 10% of pharmaceuticals in developing countries are counterfeit (WHO, 2016). WHO (2016) further states that Africa accounts for a significant percentage of counterfeit pharmaceutical products. A key factor contributing to this issue is the lack of resources, such as trained customs officers at South Africa's border, to ensure that counterfeit goods do not pass through and reach the country's streets.

South Africa faces financial struggles on various levels, and more so since the onset of the COVID-19 pandemic, resulting in limited financial resources being utilised to maintain security at sea and air ports within the country. According to SA Facts (2022a,b), customs officers undergo an 18-week training program teaching candidates good judgment, perceptiveness and leadership skills. It is uncertain if the training received during the training program creates effective and successful customs officers who can contribute towards curbing the influx of counterfeit pharmaceutical products in South Africa. The researcher aims to investigate the training of police officers to gain further insight into law enforcement's contribution towards curbing counterfeit pharmaceutical crime. Criminals enhance their methods and techniques while the training programs remain relatively similar.

Consequently, customs officers' strengths and capabilities are invisible and vastly underestimated (South African Revenue Services, 2018). This is one of the many reasons the researcher has decided to conduct a study of this nature. The researcher believes that this study's recommendations will significantly assist in addressing the challenges law enforcement faces in maintaining a society safe from counterfeit pharmaceutical products. In this study, the researcher aims to highlight techniques that law enforcement officers should be provided with during their training so that they are equipped with contemporary knowledge and are aware of the methods of criminality used to evade detection from law enforcement. The researcher believes this study's findings will highlight law enforcement's shortcomings, which can be rectified to prevent further prevalence of counterfeit crime in South Africa.

According to Kumar and Tripathi (2019), poorly enforced counterfeiting laws and weak supply chain monitoring allow criminals to progress in counterfeiting successfully. While South Africa's counterfeiting legislation maintains its robustness, it is unclear if law enforcement officers will enforce it. The authors claim that in the presence of strict counterfeiting laws, the chances of copyright violations can decrease drastically and curb the practice of counterfeiting (Kumar & Tripathi, 2019). In light of the prevalence of counterfeit pharmaceutical products becoming readily available since the COVID-19 pandemic, either of two instances must occur: the South African Government must pass a counterfeiting Bill that includes pharmaceutical counterfeiting, or the current Counterfeit Goods Act 37 of 1997 (n.d, online) must be amended to specifically include counterfeit pharmaceutical products, considering the harm their existence has on society and the South African government and economy.

The researcher believes that excluding a specific clause relating to the counterfeiting of pharmaceuticals from South African legislation indicates a gap in the existing body of knowledge. The recommendations obtained through the findings of this study will reveal the importance of including counterfeit pharmaceutical products as a punishable crime under the current South African Counterfeit Goods Act 37 of 1997 (n.d, online).

The discussions below relate to studies conducted around counterfeit pharmaceutical products. They will be reviewed and concisely discussed so that the researcher may highlight what studies have been conducted and what has been learnt from them. The review of these studies will identify areas of the phenomenon that have been neglected and which the researcher seeks to address in this study.

Several studies have been conducted internationally on the phenomenon of counterfeit pharmaceutical products. Although the prevalence of counterfeit medicines in first-world countries remains low, studies conducted in the United Kingdom (UK) and Canada show a considerable indication of contamination in the production of crucial pharmaceutical products. A study by Sammons and Choonara (2017) revealed 74 cases of contamination of pharmaceutical products in the UK over 11 years and 139 incidents in Canada over nine years. While the study revealed slight instances of contaminated pharmaceutical products, it also revealed that counterfeit pharmaceuticals were a minor problem in the UK and Canada. The researcher concurs with the author's conclusion that this results from improved detection of regulatory agencies in these countries and strict policies upheld by proficient law enforcement and customs officers (Sammons & Choonara, 2017). The study identified above by Sammons and Choonara (2017) reveals that while counterfeit pharmaceutical products do exist in developed countries, the reason for their low prevalence is a result of practised and trained law enforcement officers coupled with the stringent enforcement of legislation at entry and exit points of the country. Such police enforcement in developed countries ensures that counterfeiting is challenging to commit, thus preventing counterfeiters from engaging in this crime.

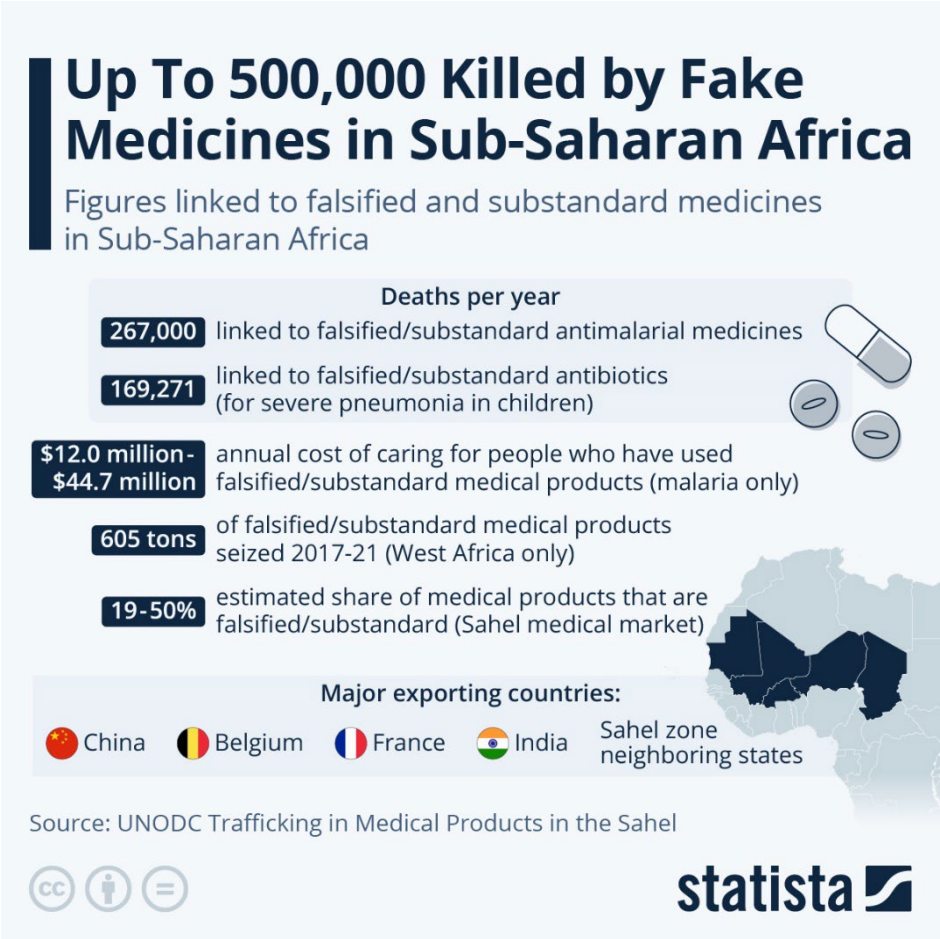
A study conducted by Rasheed *et al.* (2019) reported that out of 9089 medicine samples taken from public sector hospitals over three months in 2017, 301 samples out of the 9089 (3.3%) were counterfeit. Additionally, in the same year, counterfeit drugs issued at a public hospital in Lahore (Pakistan's Capital city) were responsible for 120 deaths.

After various other incidents in Pakistan, the Drugs Act of 1976 was enforced with stricter and harsher punishments for counterfeiters. The Government of Pakistan implemented fines of 100,000-1,000,000 Pakistan Rupees and legal punishments of 5-10 years of incarceration. Similarly to South Africa, Pakistan does not possess a specific set of legislation to punish criminals involved in the counterfeiting of pharmaceutical products. Pakistan is not yet part of any public health initiative involving the use of evolving technologies and new approaches to addressing the menace of counterfeit pharmaceutical products, and neither do they possess their interventions (Rasheed *et al.,* 2019). It is noteworthy that, like South Africa, Pakistan is a developing country. Similarly, until circumstances become grim, firmer legislation will be passed, and the public will be made aware that counterfeit pharmaceuticals exist.

In Malaysia, Zulkifli *et al.* (2016) studied sixteen (16) pharmacists with different field experiences (enforcement pharmacist, community pharmacist, and hospital pharmacist). In this sample, 56% of the participants reported that awareness programs on counterfeit pharmaceutical products improved the prevalence of the phenomenon, whilst 44% of the participants believed that awareness programs are not enough to curb the occurrence of counterfeit pharmaceuticals from existing in communities and that the existing programs need more improvement to be successful. The study reports that participants believe that the best method of creating awareness on the issue of counterfeit pharmaceutical products is via television followed by social media and the internet since most people around the world possess a device that allows them to connect to the Internet for some reason. The majority of participants in this study (i.e. 75%) stated that raising awareness about the harmful impact and consequences of counterfeit pharmaceuticals and creating interventions for the public to access are the best methods to discourage the public from engaging in the sale or purchase of counterfeit pharmaceutical products (Zulkifli *et al.,* 2016).

From the few studies mentioned above, it is apparent that this study is necessary to gather further knowledge of the phenomenon as it currently exists in South Africa. The studies mentioned above refer to counterfeit pharmaceutical products in various other countries around the world. Still, little evidence exists of studies conducted in Africa, and in instances where such studies exist, the sample size is far too small to assume or make generalisations about the phenomenon.

Below in Illustration 2, the researcher provides an illustration of the phenomenon in sub-Saharan Africa and the harm that counterfeit pharmaceuticals have caused. In the following paragraphs, the researcher highlights studies conducted in Africa and, more closely, in South Africa.



Source: Fleck (2023b, online)

Illustration 2: Fatalities in Sub-Saharan Africa as a result of counterfeit pharmaceuticals

The image above summarises the fatalities in Sub-Saharan Africa due to counterfeit medical products. The researcher appreciates this image because it captures the severity of the phenomenon, focusing on the main statistics needed to grasp the prevalence of counterfeit pharmaceuticals in the abovementioned part of Africa.

The UNODC embarked on several studies with the aim of better understanding the situation, manner, and trade of counterfeit pharmaceutical products in Africa (UNODC, 2019). These studies were initiated in 2013 and are ongoing to examine the scale of counterfeit pharmaceuticals in Africa.

The studies look at the relationship between poverty and counterfeiting, access to medical services and the general healthcare barriers in developing worlds, such as Africa. However, the studies conducted by the UNODC have not focused enough attention on the extent and prevalence of counterfeit pharmaceuticals in Africa and, more specifically, in South Africa. Hence, this study seeks to fill these gaps.

The researcher endeavours to determine the extent of counterfeit pharmaceutical products and to highlight their prevalence in the country. The UNODC (2019) explains that there are several studies and articles which address the lack of access to primary healthcare in several African countries; however, not much reference is made to the criminality attached to those preying on individuals who are unable to access proper healthcare and methods of deterring or managing the menace of counterfeit pharmaceuticals. Riley (2017) explains that developing worlds have limited basic needs such as food and water. This can only make one wonder about the authenticity of pharmaceuticals distributed in large African villages where proper testing and analysis of the counterfeit version are not perceived as a priority. This study seeks to investigate the criminality attached to supplying counterfeit pharmaceutical products due to factors such as poverty, unemployment, lack of government healthcare, fear of illness and desperation for pharmaceutical products.

Compared to America, Europe and Asia, fewer studies on the research phenomenon exist in African countries (Mhando *et al.,* 2016). However, in a study designed to explore public awareness and identification of counterfeit products in Tanzania, Mhando *et al.* (2016) conducted a cross-sectional study between January and November 2014 in Mwanza City in Tanzania, a malaria endemic area. The study took samples of two commonly prescribed antimalarial drugs and their respective counterfeit version. This study aimed to assess public awareness and the ability to identify counterfeit antimalarial medications based on simple observations, such as the appearance and packaging of the medicines. The majority of participants, 163 (55.6%), could distinguish between the original and counterfeit drug, and 190 (64.8%) perceived counterfeit medicines as an extensive problem within the country.

This study highlights that public awareness of counterfeit medicines and successfully identifying them is a significant step towards curbing the counterfeit pharmaceutical market. While this study is insightful, it is not possible to draw a conclusion on public awareness of counterfeit pharmaceutical products in Africa as the study sample is far too minute to generalise to the entire African continent (Mhando *et al.*, 2016).

A study conducted by Alfadl *et al.* (2013) focuses on consumer behaviour towards counterfeit pharmaceuticals in the developing country of Sudan. This study does not look at the high prevalence of counterfeit pharmaceuticals and the legislation surrounding it, much like the study by Rasheed *et al.* (2019). Alfadl *et al.* (2013) report on consumer demand but fail to address that the demand is only high if there is a heightened existence of counterfeit pharmaceuticals available in the markets. The UNODC (2019) mentions the high prevalence of counterfeit pharmaceuticals and explains that individuals may only demand an item they know they can easily obtain in its counterfeit version. However, the study conducted by the UNODC in 2019 was conducted in a first-world country (United States of America) and not in Africa, where various factors influence the prevalence of counterfeiting pharmaceutical products. Studies and results thereof, which are Eurocentric, cannot be an accurate representation of the magnitude of the phenomenon in Africa. In this regard, the current study aims to examine and further investigate the phenomenon of counterfeit pharmaceutical products in Africa with magnified attention to its occurrence in South Africa.

A study conducted by Steinberg (2005) provides a narrative into smuggling and border control at Johannesburg International Airport (now OR Tambo International Airport) and Durban Harbour. While the study focuses on border control and security in South Africa, it does not investigate the efficacy and intensity of training law enforcement officers receive before being posted at the country's borders. Steinberg's study was conducted only at the airport in Johannesburg and the Durban Harbour. In contrast, the current study focuses on South Africa and will zoom into areas that are prevalent with the research phenomenon. The author focuses on the state of the airport and the harbour regarding the detection of smuggling into the country, whereas the current study will focus on how law enforcement officers are trained to detect counterfeit products at the air and sea ports of South Africa.

The current study is necessary to provide insight into the extent of counterfeiting of pharmaceuticals, whether law enforcement officers are sufficiently trained to detect counterfeit pharmaceutical products, to determine the extent of counterfeit pharmaceuticals in South Africa to determine the limitations in the current South African legislature that relates to counterfeits and counterfeiting; to explore the factors that contribute to counterfeiting pharmaceutical products; to investigate the facilitation of the internet in counterfeiting and to determine if South Africa has public health interventions in place to protect its citizens against the harm caused by counterfeit pharmaceuticals. The current study intends to close the gaps in the existing literature on counterfeit pharmaceutical products in South Africa.

The following discussion will comprise the statement of the problem, the motivation of the study, the research questions, the research objectives, the definition of key concepts, the theoretical framework that will be used in the study, the research methods used, the ethical considerations that the researcher has adhered to and the chapter outline of the study. In this study, the researcher will interchange the following terms: medicines and pharmaceuticals, criminal and counterfeiter. The following is a discussion of the statement of the problem.

1.2 Statement of the problem

In this section, the researcher has chosen to provide a comprehensive perspective on the problem of counterfeit pharmaceutical products. The researcher will provide a global view of the problem but has decided to contextualise the problem by looking at Africa and then further zooming into South Africa, where the study is being conducted. In its most recent reports on the problem, WHO notes that since 2013, it has received 1500 reports of substandard or falsified products (WHO, 2017). The Organisation for Economic Co-operation and Development (OECD) estimates that counterfeit goods accounted for 2.5% of global trade in 2013 and that this "misappropriated revenue stream totalled 461 billion US dollars" (Wu, 2016). Wu (2016) further states that it is impossible to attain exact estimates of the issue in terms of the market for counterfeit pharmaceuticals specifically. However, it is reportedly valued at 75-200 billion US dollars. In some countries, the share of counterfeit pharmaceuticals available in the market may be as high as 50% (Riley, 2017). Notably, counterfeit pharmaceuticals have been discovered in 124 countries and across all continents (Clark, 2015). Riley (2017) reveals that 8-15% of all medicines globally are estimated to be counterfeit.

According to Large (2019), the sale of counterfeit pharmaceuticals is growing at twice the rate of legitimate pharmaceuticals and is expected to grow by 20% annually in the coming years. This growth is evident in seizure statistics. Consider the reports by Operation Pangea, a yearly international week of action coordinated by Interpol focused on tackling the sale of counterfeit and illicit medicines.

In 2011, Operation Pangea reported that it seized 2.4 million counterfeit pills, while in 2015, seized medicines totalled 20.7 million (Large, 2019). In 2017, the United States Customs and Border Protection seized pill presses, the equipment used to manufacture counterfeit pills. Their seizure rate was 19 times higher than in the previous years.

In the presence of the COVID-19 pandemic, Africa proves to be a lucrative ground for counterfeit pharmaceuticals to flourish. According to Schneider and Ho Tu Nam (2020), Africa

has the highest prevalence (18.7%) of counterfeit medicines. The authors go further to state that Africa is particularly at risk from counterfeit medication, with 42% of global seizures of counterfeit pharmaceuticals taking place on the African continent, making Africa the most vulnerable and affected continent. Reported to WHO from 2013 to 2017, counterfeit antimalarial medicines are alleged to have caused an additional 270,000 deaths per year in Sub-Saharan Africa. In March 2019, WHO raised alerts for counterfeit meningitis vaccines in Niger and counterfeit hypertension medicine in Cameroon. Later that year, counterfeit versions of the antibiotic *Augmentin* were discovered in Uganda and Kenya (Schneider & Ho Tu Nam, 2020). In relation to counterfeit pharmaceutical products, Africa is significantly affected by antimalarial medication (Miller, 2020). On the African continent, antimalarial drugs and antibiotics are among the most commonly reported counterfeit medicines as they are the most widely prescribed and used by doctors. Miller (2020) further reports that more than half a million people will die each year as a consequence of being infected with malaria. In sub-Saharan Africa, children are significantly affected by malaria disease as they are at a higher risk of contracting and dying from it. In 2008, around 45 million counterfeit antimalarial medicines valued at more than 430 million US dollars were sold in Africa (Sambira, 2012).

In 2013, an alarming 73% of Nigeria's analysed malaria medication was counterfeit (UNODC, 2019). The UNODC (2019) stipulates that it estimates that counterfeit malaria medicines could be causing an additional 150,000 extra deaths in sub-Saharan Africa. Another study conducted in 2015 revealed that more than 122,000 children under the age of 5 years die each year due to counterfeit malaria pharmaceuticals in Africa (WHO, 2015). The researcher wishes to highlight that on the African continent, the most prevalent sickness affecting most African countries is Malaria. This knowledge is not unknown to counterfeiters, thus allowing them to infer their trade into the supply chain with the understanding that antimalarial medicines are in constant and continuous high demand in Africa.

It must be noted that even regular, schedule zero (0) counterfeit medication poses a danger in Africa. Some of the pharmaceutical products found during police raids are cough syrups, antibiotics, anti-parasitic medicine, female contraceptives and male performance enhancers (O'Hagan & Garlington, 2018). For example, in February 2009, the Health Minister of Nigeria reported 84 baby deaths after taking a teething mixture called *My Pikin Baby*, intended to treat the pain of growing infant teeth. The mixture was discovered to contain an industrial solvent (diethylene glycol) and an antifreeze and brake fluid that tainted the mixture. Another instance occurred in Niger, where it was discovered during vaccination campaigns in 2015 and 2017

that vaccine vials contained water instead of the intended vaccine and in consequence, hundreds of people died. In 2019, the discovery of counterfeit versions of the vaccine, called *Mencevaxi*, was being sold at a local pharmacy following a nationwide outbreak of meningitis in Nigeria (Atabong, 2020). The country lies in the so-called *meningitis belt,* which stretches from Senegal in the west of Africa to Ethiopia in the east, where meningitis outbreaks are a regular occurrence.

The financial instability and continuous medical struggles make Africa the most vulnerable continent to assume advantage of. With the existence of illnesses such as malaria, meningitis and even Ebola, Africa creates an open domain for counterfeit pharmaceutical products. Amidst the possibility of contracting a sickness, several people battle the disease of poverty, meaning that they are unable to afford reliable healthcare. Instances like the above force people to obtain alternative medical assistance, which almost always bears the likelihood of being a counterfeit alternative.

In 2011, Interpol launched a global campaign against fake medicines as part of its ongoing initiative to raise awareness of counterfeit pharmaceutical products (Interpol, 2011). In aid of their initiative to raise awareness of counterfeit pharmaceutical products in Africa, Interpol established programs educating people on the dangers of fake medicines and related medical products in Senegal and South Africa. Since then, South African law enforcement officers and customs officials have been vigilant and observant towards the existence of counterfeit medication in several localities within South Africa (areas such as Greyville, Durban Central Business District, South Beach, Germiston, Bothaville, Reddersburg and Pretoria were among some of the localities in South Africa that were subject to police raids for counterfeit pharmaceutical products (Patrick, 2020). However, in the years following IMPACT and Interpol's initiatives, counterfeit pharmaceutical products have become more prominent in the news and our society due to the increasing fear and panic of the global pandemic, COVID-19 (SARS-CoV-2). The COVID-19 pandemic has created a greater demand for pharmaceutical products by individuals desperately looking for medical measures to prevent themselves and their families from contracting the virus.

Additionally, the influx of counterfeit pharmaceutical products at the onset of the pandemic and an overwhelmed police force exacerbated the issue further as dedicated task teams were already stretched and assisting officers lacked counterfeit crime experience. Without trained officers, counterfeiters latched onto the opportunity to disperse counterfeit pharmaceutical

products as far as the demand for them went. The increasing prevalence of counterfeit pharmaceutical products is evidenced by one of the initial incidents of fake COVID-19 vaccines, and Ivermectin was found at the OR Tambo International Airport in Johannesburg (McCain, 2021). McCain (2021) further informs that since January 2021, 10 months into the pandemic, seven (7) individuals were arrested for the importation of unregistered medicines, with the majority of those medicines being the apparent COVID-19 prevention and treatment drug, Ivermectin.

The following discussion pertains to the motivation of the study and the rationale that prompted the researcher to analyze this nature.

1.3 Motivation for the study

The researcher endeavours to conduct a criminological examination of counterfeit pharmaceutical products in South Africa. The rationale that prompted the researcher to embark on a study of this nature is that there has been a recent and significant increase in the prevalence of counterfeit pharmaceutical products in South Africa. Secondly, research on counterfeit pharmaceutical products in South Africa is minimal, thus probing the researcher to investigate the phenomenon further to gather further knowledge and insight on the topic.

Historically, research on counterfeiting focused mainly on the logistical methods of counterfeits being imported into the country and the economic threat such imports imposed. In contrast, research relating to specific categories of counterfeiting, such as counterfeit pharmaceutical products, has been largely neglected (Ștefănuț, 2020). Most studies provide insight into the counterfeiting of popular clothing brands, shoes, cigarettes and even money. However, they rarely focus on the extent of counterfeit pharmaceutical products and their prevalence not only since the pandemic but also in the years leading up to the pandemic. The continued existence of counterfeit pharmaceutical products in our society and its persisting distribution in South Africa are the primary contributing factors to the study.

The researcher believes that this study will bring to light the factors that cause the prevalence of counterfeit pharmaceuticals in the country, which will benefit law enforcement in their future endeavours to curb this crime. The researcher aims to fill the gap in the literature by conducting a contemporary examination of counterfeit pharmaceutical products in South Africa and by considering the pandemic's effect on the existence of counterfeit pharmaceuticals in South Africa while still maintaining an interest in its existence before COVID-19. The researcher aims to include the impact of COVID-19 on the phenomenon of counterfeit

pharmaceutical products currently in South Africa. According to Bate (2012) cited in Large (2019), several studies have been conducted globally on the social, economic and health effects of counterfeit pharmaceutical products without investigating law enforcement training, legislation or factors that cause this crime to occur. However, the nature of research proposed by this study has yet to be conducted in South Africa, thus prompting the researcher to investigate this phenomenon.

Vilks and Kilpane (2020) explain that most research on counterfeiting relies heavily on using quantitative measures and adopting quantitative data collection tools such as surveys and questionnaires. While this information establishes the incidence and prevalence of counterfeit crime and consequently the need for policies and legislation, it cannot provide specific information on counterfeit pharmaceutical products as it mitigates the experiences, thoughts and opinions of those individuals with first-hand experience and knowledge on the subject.

This study fills a gap in the literature by adopting a qualitative approach whereby the researcher will examine the prevalence of counterfeit medication through narratives of lived experience and expertise of stakeholders with first-hand involvement and knowledge on the research topic. Previous studies have used alternate methodologies (such as the quantitative methodology) to examine and explore the phenomenon of counterfeit pharmaceutical products (Wang, Lin & Choi, 2020). In addition, several other studies have failed to include participants from various demographical groups. The poor, marginalised and uneducated are often neglected in research studies. The current study intends to include participants from any/all demographical groups to allow for a holistic study to be conducted. This study will focus on uncovering how individuals contribute to counterfeiting regardless of their background or status. Previous research negates the ideology that marginalised individuals and communities can commit commercial crimes.

The assumption that educated individuals are the masterminds behind commercial crime results in a biased view of counterfeit crime. Research on counterfeiting explains that thorough, well-planned and intelligent criminals conduct this crime, and consequently, policies, legislation, and practices rely heavily on this developed view of counterfeit crime. This results in the absence of a theoretical framework to understand the phenomenon in its cultural context. South Africa, for instance, is culturally and socially diverse, and opinions about counterfeiting vary, thus making it difficult to explain the phenomenon using a single perspective. However, the study used semi-structured interviews to gather varying opinions and personal experiences rather than a single narrative that is only quantifiable.

The methods used in this study will assist in broadening the scope of understanding counterfeit crime and those involved in this criminal activity. It is evident from the introductory literature above that there are existing gaps in the current knowledge and that a study of this nature is necessary to address those gaps and subsequently add to the existing body of knowledge on the research phenomenon. Finally, this study not only looked at counterfeit pharmaceutical crime in its prior existence but extends further to include the impact of the COVID-19 pandemic and its effect on the phenomenon's prevalence.

The following are the research questions that the study will address.

1.4 Research questions

This study aims to gather precise and concise knowledge of counterfeit pharmaceutical products being available in our society, but more specifically, the following research questions will be addressed:

1. To what extent are counterfeit pharmaceutical products being produced in South Africa?
2. How are South African police officials trained to detect counterfeit pharmaceutical products?
3. What limitations exist within the current South African legislature relating to counterfeit crime?
4. How does the internet facilitate criminal organizations dealing with counterfeit pharmaceutical products?
5. What factors contribute to the influx of counterfeit pharmaceutical products in South Africa?
6. What Public Health Interventions does South Africa have in place to protect citizens against counterfeit pharmaceutical products?

The following are the objectives of the study.

1.5 Objectives of the study

This study has six (6) objectives. The objectives of the study are:

1. To determine the extent of counterfeit pharmaceutical products being produced in South Africa.

2. To examine how South African police officers are trained to detect counterfeit pharmaceutical products.
3. To examine and investigate the legislature that South Africa has in place to deal with counterfeit crime.
4. To investigate how the internet facilitates criminal organizations dealing with counterfeit pharmaceutical products.
5. To determine the factors contributing to the influx of counterfeit pharmaceutical products in South Africa.
6. To investigate the public health interventions that South Africa has in place to protect citizens against counterfeit pharmaceutical products.

The following are the definitions of concepts used for this study

1.6 Definition of concepts

1.6.1 Counterfeit

Over the years, various definitions have emerged for *counterfeit*. Many of these definitions maintain a central focus on not only the illegal aspect of the term but also the immoral aspect. According to Ahmed, Abbasi and Farooq (2020), counterfeit refers to an unlawfully manufactured product. The authors describe *counterfeit* as a low-priced product that is manufactured in a manner that resembles a more costly and genuine product but is inferior in terms of its value, performance and reliability (Ahmed, Abbasi & Farooq, 2020). Hoecht and Trott (2014) state that counterfeit products infringe on an owner's intellectual property rights, typically a trademark or patent. Counterfeit refers to those products that act as fake replicas that cost significantly less than the original product and utilize a brand name or logo without the owner's authorisation (Liu, Dalton & Hang, 2018).

Counterfeit products are deemed forged or *floozy* items and unauthorised original product duplicates (Spink *et al.*, 2013). Section 1(iv) of the South African Counterfeit Goods Act 37 of 1997 (n.d, online) establishes counterfeiting as the manufacturing, producing or making of any goods without the authority of the owner of any intellectual property relating to the goods, whereby the protected goods are imitated in such a manner and to such a degree that they are identical copies of the original protected goods (Counterfeit Goods Act 37 of 1997, n.d, online).

Counterfeit goods are often disguised with familiar and popular brand names and well-known logos to trick customers who rely on branded products when purchasing items.

Such products can enable buyers to assume, against their better judgement, that it is authentic but that they have bargained with a product they know to be far more expensive. Counterfeit goods are often unapproved items of lesser-quality ingredients or materials (UNODC, 2010).

1.6.2 Counterfeit pharmaceuticals

Despite the increasing awareness of counterfeit pharmaceuticals, a single definition of the term proves challenging to extract from existing literature. While a clear definition of this crime varies from country to country, the World Health Organisation (WHO) noted that this inability to develop a universally accepted definition of counterfeit pharmaceuticals has resulted in stunted progress of research studies and inhibition to combat the phenomenon (WHO, 2015). To resolve this, WHO defined counterfeit pharmaceutical products as

> *"ones which are deliberately and fraudulently mislabeled concerning identity and/or source. Counterfeiting can apply to branded and generic products, and counterfeit products may include products with the correct ingredients or with the wrong ingredients, without active ingredients, with insufficient active ingredients or with fake packaging"* (WHO, 2015).

As part of the initial steps of the IMPACT initiative, the group sought to improve and expand on the definition of counterfeit pharmaceuticals provided by WHO. The revised definition by IMPACT is as follows:

> *"the term counterfeit medical product describes a product with a false representation of its identity and/or source. This applies to the product, container or other packaging or labelling information. Counterfeiting can apply to both branded and generic products. Counterfeit pharmaceuticals may include those products with correct ingredients, with incorrect ingredients, without active ingredients, with incorrect amounts of active ingredients or with fake packaging"* (Lybecker, 2016, 81).

Lybecker (2016, 107) continues that the simplest conceptualisation of counterfeit pharmaceuticals may be stated as a "false or fake product aimed at manipulating the end user into thinking it is original and safe for consumption". This research study adopted the terminology and definition the World Health Organisation provided above.

1.6.3 Counterfeiting

Counterfeiting is a crime that involves the theft of an individual's or business's trademark, typically used to help consumers identify their specific products (Brennan, 2016). Brennan

(2016) further explains that a trademark refers to a phrase, symbol, word or logo that identifies the origin of a specific commodity or makes it specific to a certain creator or designer. The author explains that by counterfeiting, criminals profit by exploiting the product's original reputation. Counterfeiting refers to the fraudulent manufacturing of a well-established product (Buckley & Gostin, 2013).

Counterfeiting damages a company/brand's reputation and consumer confidence in the global market. It creates mistrust among customers who seek to purchase the original brand. Buckley and Gostin (2013) state that counterfeiting is illegally manufacturing and selling exact replicas of an original product such as clothing, electronics or medication. The author adds that counterfeiting allows criminals to produce an item at a low cost and make a significant profit. According to Wall (2016), counterfeiting is the manufacture, import, export, distribution, and sale of products that are not genuine but designed and branded to look identical to an authentic product to deceive consumers into thinking they are authentic. The author continues to explain that counterfeiting includes affixing a specific trademark of a well-known brand to a product even though the product is not made or authorised by that brand (Wall, 2016). Counterfeiting is the unlawful duplication of something valuable and profitable with the intended purpose of being deceptive to the buyer of such a product.

1.7 The theoretical framework underpinning the study

Table 1: An exposition of the Criminological theories to explain counterfeit pharmaceutical products in South Africa.

General theory	Specific theory	Year of development	Exponents of the theory
Criminological	The Rational Choice theory	18th century	Cesare Beccaria and Jeremy Bentham
Criminological	The General Strain theory	1985	Robert Agnew (1985)

For this study, the researcher will utilize the abovementioned theories to explain counterfeit pharmaceutical products in South Africa. The theories highlighted above are the primary theories upon which this research study will be conducted. The rationale for choosing and using the above theories is that it is impossible to isolate a single theory that best explains the occurrence of counterfeit pharmaceuticals in society. The amalgamation of the rational choice

theory and the general strain theory assists in fulfilling the shortcomings of another theory to explain the research phenomenon better. Both theories are applicable and appropriate in describing the occurrence of the research topic under study. The following discussion pertains to the research methods employed by the researcher to conduct the study. However, this section is covered extensively in chapter four of the study. Here, the researcher briefly highlights the research methods selected and applied for this study (*see chapter four for a comprehensive discussion on research methods).*

1.8 Research Methods

The following is a brief outline of the research methods used for this research project.

1.8.1 Research design

The study will make use of an exploratory research design. This research design has been chosen because it will provide valuable insight into counterfeit crime and the existence of counterfeit pharmaceutical products in South Africa (Creswell & Creswell, 2018). The methodological approach selected is suited to a study such as this as it seeks to delve deeper into an area that the researcher has an awareness of, has witnessed, and wishes to investigate further and explore the phenomena. Swedburg (2018,19) states that exploratory research "consists of an attempt to discover something new and interesting". This statement provided by the author further influences the researcher's decision to utilise the exploratory research design because counterfeit crime is a phenomenon that occurs vastly in our society. Yet, research on it remains limited within South Africa. The exploratory research design suits this research study because it allows new knowledge to emerge from a few existing studies (Rahi, 2017).

Wimshurst (2011) explains the exploratory research design that encourages the researcher to acknowledge that applying this research design will provide a greater understanding of counterfeit crime and allow the nature of counterfeit medication's prevalence to be scientifically determined. This methodological approach allows the researcher to perceive the research topic as it currently occurs. The chosen research design is flexible and provides the foundation for future studies to be conducted on the subject (Reiter, 2017).

The researcher has chosen a qualitative research approach for this study. Korstjens and Moser (2018) explain that this research approach provides a greater understanding of the topic that would otherwise not be captured by using a quantitative or mixed methods approach. Allan

(2020) suggests that qualitative research is an enquiry approach useful for exploring and investigating a phenomenon such as counterfeit pharmaceutical products in South Africa. The author further states that qualitative research is naturalistic in that its goal is to acknowledge, appreciate and examine a phenomenon as it occurs in its natural setting (Allan, 2020). The researcher has chosen to adopt the qualitative research approach for this study to comprehend the topic from the perspectives of the local police (counterfeit crime officers) who are directly affected by counterfeit pharmaceutical products and have an immediate association with counterfeit pharmaceuticals through their fieldwork and through the cases that they have assisted with or worked on (Silverman, 2020).

1.8.2 Sampling

The researcher has chosen a sample size of approximately 25 participants for this study, which included fifteen (15) police officers from the commercial crime branch of the South African Police Services (SAPS) located in the Kwa-Zulu Natal Province and ten (10) officers from the Directorate of Priority Crime Investigations (most commonly referred to as *The Hawks*) located on the esplanade in Durban Central, Kwa-Zulu Natal. From the commercial branch of the SAPS and The Hawks, the researcher will specifically select participants with experience with counterfeit goods and extensive knowledge of the legislation surrounding counterfeit crime and how it remains to be enforced. These participants have been selected as they represent an essential level of authority integral to the study, possess first-hand knowledge of the research topic, and are well acquainted with events relating to the phenomenon under study. The selected sample was central to the research topic as they possess valuable insight and experience that will aid the study in achieving its aims and objectives (Schreier, 2018).

The sampling technique used to conduct this study will be non-probability sampling. The researcher will employ purposive and snowball sampling to select the participants for this study. This technique has been chosen to answer the study's research questions specifically to ensure that the study can meet the aims and objectives listed above. The sampling technique chosen for this study will be used by first determining the information needed and then selecting those participants that will provide the most useful and insightful data (Rahi, 2017). The researcher will utilize snowball sampling to allow previous participants to nominate another suitable and experienced participant to provide input to the study. This technique will also assist the researcher by saving crucial time in the data collection phase of the study. While sampling the participants, the researcher will clearly indicate that participation is voluntary and that all identities remain confidential (Swedburg, 2018).

1.9 Data collection

For this study, the researcher will use semi-structured interviews with predetermined questions formulated utilizing the literature review data (Evans & Lewis, 2018). Data collection will also take place based on an extensive literature review on the topic. Roulston and Choi (2018) explain that these data collection methods provide comparable data and a keen understanding of the topic. The semi-structured interviews were one-on-one interviews using predetermined questions. Probing questions were also used during the interview. The participants were protected by remaining anonymous and ensuring that the questions asked did not embarrass or victimize them. The information the participants provided was kept confidential, and the participants signed an informed consent form before proceeding with the interview (Roulston & Choi, 2018).

In adherence to the COVID-19 pandemic regulations and the protocols set by the University of Kwa-Zulu Natal for research studies, the researcher strongly considered various online data collection forms and provided these options to each participant should they wish to conduct their interview in this manner. For this study, if the participant did not wish to conduct an in-person interview, data collection will occur through online platforms such as Skype, Zoom or WhatsApp video calls (Archibald *et al*., 2019). In cases where the above methods proved difficult, the researcher used telephonic interviews arranged at the most convenient time for the participant (Farooq & De Villiers, 2017). As a final solution to collecting data during the pandemic, the researcher used e-mail questionnaires to gather data from participants. The researcher ensured that each participant's confidentiality and anonymity would be preserved regardless of which platform the participant chose to use to participate in the study (Duan *et al.*, 2020). In these instances, the researcher obtained both written informed consent and recorded verbal consent from each participant in the study.

1.10 Data analysis

According to Creswell *et al.* (1998), there are three steps in analyzing qualitative data: data reduction, constructing data displays and drawing conclusions. Data reduction entails categorizing, coding, theory development, intention, and negative case analysis. Categorization is the process of coding and labelling sections of the transcripts or images into themes. The categories can be integrated into a theory through the iterative analysis of the data. Data displays entail displaying picture findings or figures so that data can be more easily digested and communicated. After a vigorous iterative process, the researcher can conclude and verify

his/her findings. During data verification and conclusion, the researcher establishes the credibility of their data analysis. The researcher transcribed interviews and research field notes to analyze them and understand the participants' perceptions and experiences. The researcher thematically analyzed the collected data. Transcribing the data means that the researcher will transform the oral interview into a written structure for analysis purposes (Creswell, 2007). Transcripts of the data or recordings from the actual interviews were reviewed several times to highlight patterns in the data. The researcher generated or identified initial codes that appear interesting and meaningful. Thereafter, the themes were named and defined. Lastly, the researcher transformed the analysis into an interpretable report. This final report will go further than just a description of the themes. It portrayed an analysis supported by empirical evidence that addresses the research question (Davis & Meyer, 2009).

1.11 Ethical consideration

Before conducting this study, the application was submitted to the University of Kwa-Zulu Natal Ethics Committee. An informed consent form that guarantees that all responses will remain confidential was presented to the participant before the interview.

The researcher obtained permission from the relevant law enforcement agencies (on national and provincial levels) to conduct this research study. To protect the identity of the participants, the research report will merely list participants as *Participant 1, 2, 3* and so forth. The nature and quality of the participants' work were kept strictly confidential. The information provided to the researcher from the participants was kept secure. The researcher indicated to each participant that their participation was voluntary and that they may withdraw from the interview without any negative consequences. During data collection, the participants were notified that they may discontinue the study should they wish to do so.

1.12 Research Outline

The following diagram represents the research outline of the study.

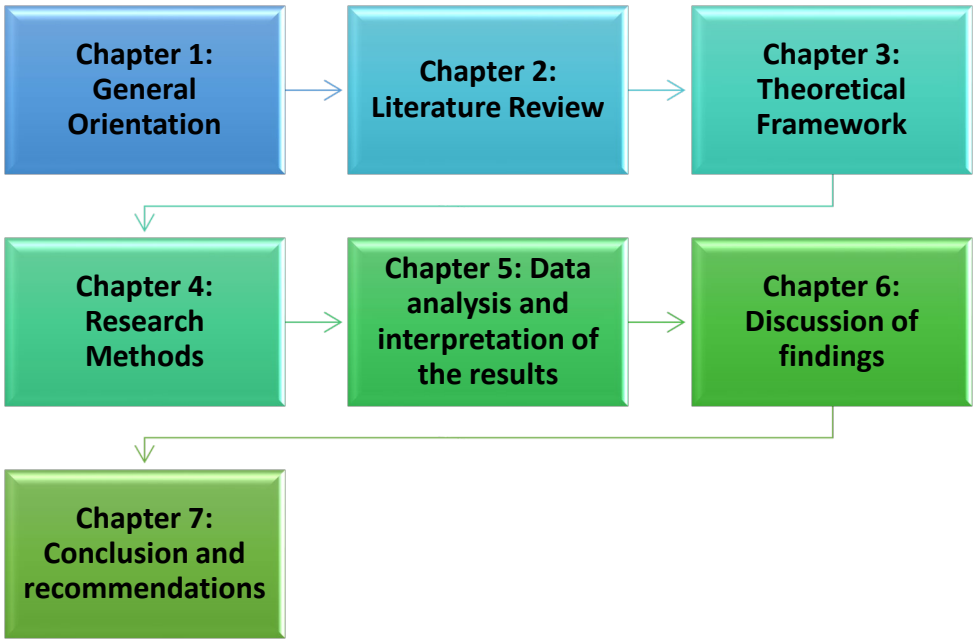


Illustration 3: Research Outline

Chapter 1: This chapter familiarises the reader with the research problem, the aims and objectives of the study, the research questions and the motivation of the study. This chapter further describes, in minimal detail, the theoretical framework, the research methods used and the ethical considerations of the study.

Chapter 2: This chapter comprises the literature reviewed to explain the phenomenon of counterfeit pharmaceutical products in South Africa. The researcher extensively discusses the existing literature on the research phenomenon in this chapter.

Chapter 3: Comprises a discussion relating to the theories underpinning the study. The researcher will discuss the motivation for choosing the selected theories. This chapter applies the relevant theories to gain greater insight and understanding of the research phenomenon.

Chapter 4: This chapter focuses on the study's research design and includes a discussion on the sampling, data collection and the process involved in collecting data, data analysis and its process as well as a detailed explanation of the ethical considerations this study aims to adhere to. The researcher will also provide insight into the limitations of the study.

Chapter 5: Comprises a critical evaluation of the collected data and provides an extensive analysis and interpretation of the data collected from the participants.

Chapter 6: This chapter discusses the findings, attaining the research objectives, and answering the study's research questions.

Chapter 7: This is the concluding chapter of the study. It will list recommendations and highlight possible areas and gaps for future research.

1.13 Conclusion

In this first chapter, the researcher provided a general orientation of the phenomenon under study and clearly illustrated and elaborated on the problem globally and on the African continent. The researcher provided insight into the global prevalence of counterfeit pharmaceutical products further relaying the relevance of the study.The motivation of the study revealed the necessity for the current study to be conducted, especially in an African context where the phenomenon appears to be on the rise. The researcher expanded on the concepts used in the study by clearly defining those that are deemed crucial to the topic under study. The research questions and objectives are visibly stipulated, and the study's theoretical framework is highlighted. The researcher briefly introduced the rational choice theory and the general strain theory as the theoretical framework underpinning the study by highlighting their relevance in explaining counterfeit pharmaceutical crime. The research methodology that was deemed as the most appropriate for this study was briefly elaborated on, and finally, the research outline displayed the structure of the thesis.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

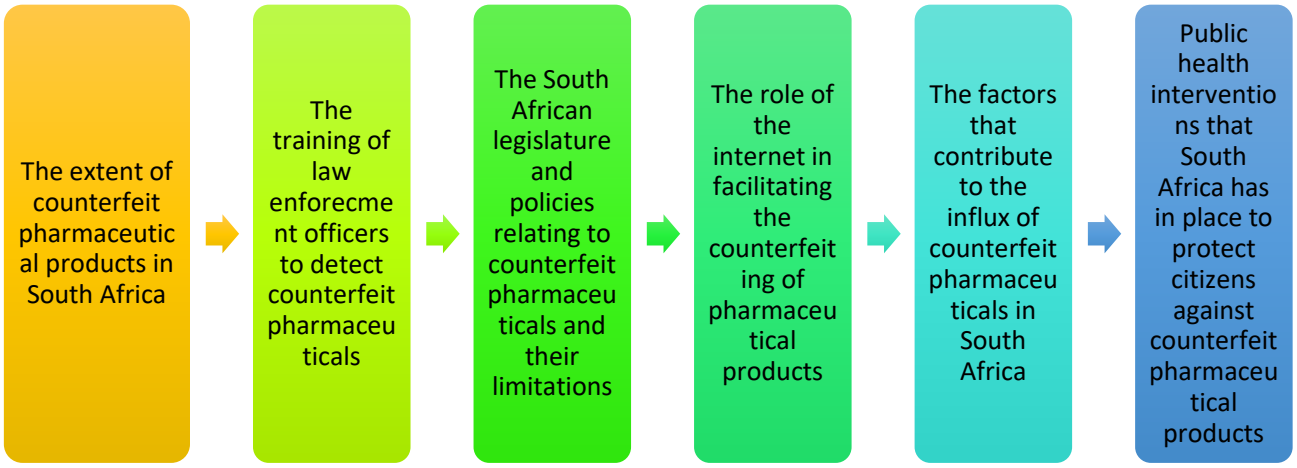
The literature review is the collection of all the available literary documents, both published and unpublished, on the research topic under study. The literature chosen contains information, ideas, statistics and evidence written from a particular standpoint to fulfil certain aims or express specific views relating to the chosen topic. It also includes how the topic will be investigated and the effective evaluation of these literary documents in relation to the topic under study (Pokhrel & Chhetri, 2021).

The purpose of this literature review is to examine the current body of knowledge that presently exists on the topic of counterfeit pharmaceutical products. It also determines how other scholars have researched the phenomenon, what areas of the topic they investigated, and the extent to which they explored those areas. The literature review will allow the researcher to identify the gaps in existing knowledge and to determine how this study will facilitate closing those gaps.

For this study, the researcher wishes to determine how other scholars comprehended, theorised and conceptualised the current research topic of counterfeit pharmaceutical products. The researcher aims to determine what empirical data has been collected by previous researchers whilst investigating counterfeit pharmaceutical products. The literature review will closely focus on the following topics:

- The extent of counterfeit pharmaceutical products in South Africa;
- The training of law enforcement officers (police officers from the commercial crime branch and The Hawks) to detect counterfeit pharmaceutical products;
- The South African legislature and policies that relate to counterfeiting as well as their limitations (if any);
- The role of the Internet in facilitating criminal organisations that deal in counterfeit pharmaceutical products;
- The factors that contribute to the influx of counterfeit pharmaceutical products in South Africa;
- South Africa has public health interventions in place to protect its citizens against the harm caused by counterfeit pharmaceutical products.

Illustration 4: Literature review topics to be discussed



To understand the incidence and prevalence of counterfeit pharmaceutical products in South Africa, it is imperative to investigate and evaluate the extent of counterfeit pharmaceutical products so that it paints an image of how extensive this crime is. The researcher wishes to discuss the extent of counterfeit pharmaceutical products in South Africa in the discussion below.

2.2 The extent of counterfeit pharmaceutical products in South Africa

The growing phenomenon of the falsification of pharmaceutical products threatens the right to life as enshrined in the different international human rights instruments and, for this study, Section 11 of the South African Constitution (Serfontein, 2015). Dr Paul Newton concisely captures the challenge of determining the scope of the problem:

> *"There is no data that allows anything more than (badly) informed guesses as to the global extent of the problem. The paucity of reliable data means that it is difficult to know whether the problem is getting better or worse, how the epidemiology of substandard and falsified medicines differ and whether interventions are effective"* (Newton, 2012, 70)

There are many estimates regarding the enormity of the global counterfeit trade; however, the verity of these estimates remains questionable. Several of these estimates appear to be drawn

from nullity, whilst those most cited and those from reliable sources have uncertain origins and debatable methodologies. The Organisation for Economic Co-operation and Development (OECD) (2019) states that capturing the extent of the counterfeit trade problem is further complicated by factors such as incomplete data sets, lack of resources in developing countries to test the authenticity of pharmaceutical products, the ineptitude to pool data; the scarcity of rigorous epidemiological studies; the expense of advanced laboratory tests; biased sampling during collection and a substantial grey market outside the legitimate supply chains (OECD, 2019).

Although there are multiple estimates regarding the global amount of counterfeit pharmaceuticals, the most cited statistics on counterfeit pharmaceuticals originate from the World Health Organisation (WHO), which estimates that 10% of the global pharmaceutical market is counterfeit (WHO, 2018) and places the annual death toll from counterfeit medicines at almost 1 million with the single largest group being Africa where roughly 200 000 people are estimated to die from counterfeit antimalarial drugs. WHO (2018) further reports that the share of counterfeit pharmaceuticals in some developing countries is as high as 50-70%. Despite the extensive use of the above figure, it is unclear where it originated, thus leaving several unanswered questions regarding the methodology used to make the calculation.

In a workshop in 2005, Harvey Bale, Director General of the International Federation of Pharmaceutical Manufacturers and Associations (IFPMA), stated that the estimated 10% of global counterfeit pharmaceuticals is statistically improbable (Zarocostas, 2006). The author further explains that 85% of the global counterfeit market is in developed economies, where counterfeit pharmaceuticals comprise less than 0.2%. The occurrence of counterfeit pharmaceutical products in the remaining 15% of the world would have to be 66% to justify the global figure of 10%. This global estimate remains a current and ongoing debatable topic till date.

Admittedly, accurate data on the magnitude and prevalence of pharmaceutical counterfeiting is nearly impossible to obtain. In addition to the estimate provided by WHO (2018), another reliable estimate is maintained by the Pharmaceutical Security Institute (PSI). This organisation is committed to preserving public health by sharing information on the counterfeiting of pharmaceutical products and initiating enforcement through the relevant authorities (Pharmaceutical Security Institute, 2017).

PSI has collected data on counterfeiting and related pharmaceutical issues (illegal diversion of medicines and brand theft) for fourteen consecutive years, thus providing credible and reliable information on counterfeit pharmaceuticals. According to PSI (2017), a 2016 analysis of 3,147 incidents revealed the following:

- Concerning 2015, the 2016 figures indicate a 5% increase in the global incidence of counterfeit pharmaceuticals;
- Between 2011 and 2016, incidents of counterfeit pharmaceutical products increased by 56%;
- Counterfeiters targeted pharmaceuticals in every therapeutic category;
- Counterfeit pharmaceuticals impacted 127 countries;
- Incidents in the North American region increased by over 100% and surpassed 1000 incidents in which 1258 different medicines were involved;
- Many incidences exposed that over 64 different medicines were discovered in one case.

A large quantity of global pharmaceutical sales occurs in North America and Europe, and it is necessary to report that these developed regions of the world are not immune to the peril of counterfeit pharmaceutical products (Bichell, 2017). Orton *et al.* (2019) report that in 2008, the European Customs Union detected over 3200 attempts to import counterfeit medicines, involving almost 9 million items believed to originate from India. The bulk of this trade involves *lifestyle drugs*, such as Pfizer's Viagra. The European Customs Union reports that such lifestyle drugs are often purchased online due to the shame and embarrassment attached to purchasing this product in a pharmacy. The researcher notes the role of the internet in facilitating counterfeit crime anonymously and will discuss this in greater depth at a later stage in the chapter (*see section 2.5)*

According to the European Commission's Taxation and Customs Union, Syria has been a centre for counterfeit pharmaceutical trafficking in Europe and the Middle East for some time (European Commission's Taxation and Customs Union, 2020). The Union further informs that it is estimated that 37% of the counterfeit pharmaceuticals seized at the European borders originated from Syria. Europol also notes that the western part of the Balkans is also a hub for counterfeit pharmaceuticals originating from China and arriving in the Black Sea through parts of the Adriatic or Ionian Sea (Europol, 2019). The case of counterfeit *Avastin* is illustrated in this complexity. *Avastin*, a drug used to treat cancer, was discovered in the United States in 2012 and was deemed counterfeit after inspection. The origin of the counterfeit medicines

remains unknown, but officials reported that the counterfeit medicines passed through Turkey, Switzerland, Denmark and the United Kingdom before reaching the United States via a Canadian-based firm (Blackstone, Fuhr & Pociask, 2014). This demonstrates that it is imperative that border control and customs officers, along with specialised units of the police, are expertly trained to deter criminal organisations from using air and sea ports as entry points for their illegal operations. The researcher aims to expand on the training of customs and police officers later in this chapter (*see Section 2.3)*.

In 2017, the United States Customs and Border Protection reported the seizure of pill presses, the machines used to manufacture counterfeit pills, at a rate 19 times higher than in 2011 (Interpol, 2017). Ganim (2017) states that pill presses can manufacture up to 170,000 pills per minute. Similarly, another measure of the counterfeit pharmaceutical issue is the market size of the global counterfeit pharmaceutical detection devices. In 2016, the global counterfeit drug detection devices market was valued at 904,5 million US dollars and is anticipated to reach over a billion US dollars by 2021 (Globe Newswire, 2018). To place this number in perspective, a 2015 report by Interpol stated that pharmaceutical sales reached 1.1 trillion US dollars in 2015 (Riley, 2017).

Furthermore, suppose the counterfeit pharmaceutical industry is estimated to total as much as 200 billion US dollars annually. This is only slightly less than the 246 billion US dollars in illicit drug trade (Peasgood, 2015). The author continues by stating that the above figures highlight that the counterfeit pharmaceutical market is more lucrative than the narcotics trade.

Despite the relatively low number of counterfeit pharmaceutical sales in developing countries, counterfeit pharmaceuticals are particularly prevalent in Southeast Asia and Africa. According to WHO (2020), counterfeit pharmaceuticals comprise less than 1% of the market value in many developed countries, although this figure may have creased amidst the COVID-19 pandemic. In some developing countries in Africa, Asia and Latin America, the share is between 10-30%. WHO (2020) continues that as much as 50-60% of anti-infective medications tested in parts of Africa and Asia were discovered to contain active ingredients deemed outside of acceptable limits.

According to the Pharmaceutical Security Institute incident database, countries in Asia report one of the largest portions of counterfeit pharmaceuticals detected globally, with Africa responsible for only 2% (PSI, 2017). The PSI (2017) adds that this is undoubtedly a product of enforcement capacity, as field tests of pharmaceutical products in both regions have produced

similarly high shares of counterfeit pharmaceutical products. For example, one of the most commonly counterfeited medicines is *Artesunate*, an antimalarial artemisinin derivative made in China and widely used in Southeast Asia and Africa. Bottoni & Caroli (2019) state that there are at least 16 discovered manufacturers of Artemisinin in Asia, and millions of tablets are produced each year for local consumption and export. The authors continue that street vendors in West Africa have reported that this antimalarial medicine is among their most popular pharmaceutical products (Bottoni & Caroli, 2019).

In May 2021, Interpol coordinated *Operation Storm*, in which roughly 200 raids were carried out in Cambodia, China, Singapore, Thailand and Vietnam (Interpol, 2021a). The raids resulted in 27 arrests and the seizure of 16 million pills with an estimated value of 6.6 million US dollars. Later in the year, Operation Storm II resulted in the seizure of 20 million counterfeit and substandard medicines, 33 arrests and the closure of almost 100 pharmacies and illicit medicine outlets.

In 2010, Interpol coordinated *Operation Mamba* in Tanzania, in which 191 locations were inspected. Medicines of all types, including antimalarial tablets, were confiscated, and 22 pharmaceutical retailers were shut down (Interpol, 2010). Subsequently, a similar effort was made in Uganda and Egypt. In May 2009, Interpol seized ten containers, each holding thousands of counterfeit pharmaceutical products marked for Uganda and Egypt as their destination points (Interpol, 2010).

In March 2020, several countries worldwide went into a lockdown following the onset of the COVID-19 pandemic (medically termed SARS-COV-2) (Jena, 2020). COVID-19 was discovered in December 2019 in Wuhan, China, and was detected in multiple countries in and around March 2020. The COVID-19 pandemic caused widespread panic at its onset, and counterfeiters took advantage of the global medical fear and paranoia. The COVID-19 pandemic provided counterfeiters a new opportunity to manipulate the high market demand for medical products, personal protection equipment and hygiene products. It provided a new avenue for counterfeiters to conduct business for their financial benefit regardless of the effects of their counterfeit medicines on communities.

Vilks and Kilpane (2020) illustrate an example of counterfeiters preying on the desperation of medical supplies at the beginning of the pandemic. The authors describe an instance whereby the German state in North Rhine experienced a shortage of face masks for medical staff. They attempted to buy a bulk amount of masks, and it was subject to transnational organised criminal

group schemes for undelivered masks worth almost 15 million euros. Further investigation uncovered that a bulk of that amount had been wired to an account in Nigeria that was subject to raids for the production of counterfeit face masks that do not meet medical standards (Vilks & Kilpane, 2020).

Additionally, Erasmus (2022) informs that from January 2022 until April 2022, COVID-19-associated scams equated to roughly 13.4 million US dollars in America. In the United Arab Emirates, 1541 cyberattacks related to COVID-19 were detected, 775 malware threats, 621 spam email attacks and 145 URL attacks, all related to procuring COVID-19-related products. In Thailand, 300 thermometers were seized after determining they did not meet European Union (EU) regulations (Erasmus, 2022).

According to Interpol (2020), *Operation Pangea XIII* seized more than 37000 unauthorised and counterfeit medical products and devices, with a vast majority of these products being surgical masks and self-testing kits for COVID-19, HIV and glucose levels. Interpol authorities seized roughly 4.4 million units of counterfeit pharmaceuticals worldwide in 2020 (Interpol, 2020). Among the seized items were anti-cancer medication, erectile dysfunction pills, hypnotic and sedative agents, anabolic steroids and muscle enhancers, analgesics, nervous system control medicines, and dermatological and immune-boosting vitamins. Interpol officials also discovered counterfeit antimalarial medication and weight loss aids that have been banned from use due to their harmful effects (Interpol, 2020).

The COVID-19 pandemic led to a sudden and intense demand for pharmaceutical products, and criminal organisations used this panic-induced demand to their advantage, especially on the African continent (UNODC, 2019). The UNODC further informs that during the pandemic, Africa witnessed an increase in trafficking incidences at their seaports, with some of these ports located in Lome, Cotonou and Bombasa. According to the UNODC (2019), criminal organisations arrange their operations to manufacture and distribute pharmaceutical items. These include but are not limited to COVID-19 testing kits for people to diagnose themselves or their loved ones, preventative products such as hand sanitisers and alcohol wipes, and personal protective equipment such as N95 face masks and face shields.

In March 2022, a pan-African police operation jointly coordinated by Interpol and Afripol identified hundreds of suspects and seized over 12 million counterfeit pharmaceutical and health products (Interpol, 2022). *Flash-IPPA* (codename for Illicit Pharmaceutical Products in Africa), a two-month-long investigation, brought together law enforcement officers from 20

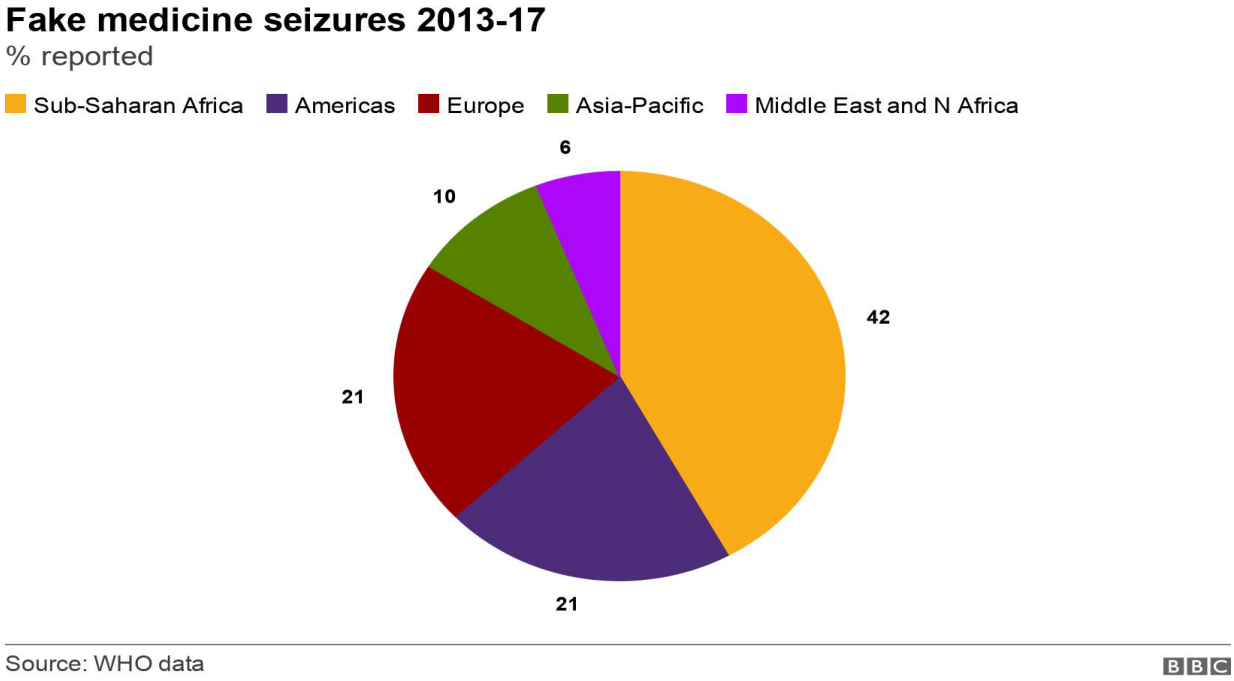
African countries to dismantle organised criminal groups behind the regional pharmaceutical crime. Interpol reports that frontline officers conducted inspections at roadblocks, open markets, pharmacies, warehouses and other locations that were suspected of producing, smuggling, storing or distributing counterfeit pharmaceutical products (Interpol, 2022).

At a glance, Flash-IPPA seized 2 million counterfeit anti-convulsing tablets, 300,000 epilepsy treatment pills, 1600 rapid COVID-19 test kits and more than 208,000 COVID-19 face masks. The operations most commonly seized counterfeit pharmaceutical products include antibiotics, anti-inflammatories, analgesics and medication used to treat epilepsy, erectile dysfunction and rheumatism. Counterfeit syringes, x-ray machines and stethoscopes were also seized. Through the Interpol-Afripol operation, African law enforcement seized more than 27 tons of various counterfeit pharmaceutical products in Benin, West Africa. Further investigations across Libya led to the seizure of more than 11.5 million counterfeit painkillers and infantile epilepsy tablets, while a raid in Niger saw the seizure of 300 000 epilepsy pills. In Zimbabwe, police authorities arrested more than 2000 individuals during the nationwide Operation Flash-IPPA, all believed to be actively part of a counterfeiting syndicate (Interpol, 2022).

Fear of the COVID-19 pandemic, financial constraints to procure medical resources, and the inability to identify the authenticity of medical products have nudged the African population towards counterfeit pharmaceutical products, which are often obtained from unreliable sources and contain harmful effects on human life. Schneider and Nam (2020) explain that this occurrence is bound to increase as panic and fear of infection spread across the continent. The authors add that in hopes of calming the chaos, counterfeit pharmaceutical products needed to prevent and treat COVID-19 are inevitable from circulating in local pharmacies and markets, not only because of their accessibility but also because of their affordability. Ziavrou *et al*. (2022) explain that factors such as poorly enforced legislation, lack of well-trained customs and police officers at the country's borders and affordability of medicines greatly influence the prevalence of counterfeit pharmaceutical products.

The ravelling economic situation of many households worldwide was under further stress at the onset of the pandemic, leaving many feeling as if healthcare was just as necessary as consumables to survive the virus. With that in mind, counterfeiters created a niche by fulfilling the demand as the fear of the pandemic grew. Counterfeiters were motivated by people's desperation to keep their families safe and healthy. People purchased counterfeit medicines

when they felt they were running out of ways to secure medicines for their families (Ziavrou *et al*., 2022).



Source: WHO (2018)

Illustration 5: Percentage of counterfeit medication seized from significant continents from 2013 to 2017

In Illustration 5 above, the researcher provides an image that displays the percentage of counterfeit pharmaceutical seizures between 2013 and 2017 in 5 global areas of prevalence (Katerere, 2021). The image in Illustration 5 reflects that 42% of counterfeit medicines were seized in Sub-Saharan Africa, where South Africa is a regional superpower. Below, the researcher highlights recent incidences of counterfeit pharmaceuticals in South Africa.

As identified in the image above, South Africa has not been exempt from its fair amount of counterfeit crime pertaining to pharmaceuticals. The researcher wishes to highlight some of the recent instances of counterfeit pharmaceutical products in South Africa:

- In August 2020, the Hawks, Health Department officials and Metro Police conducted a raid in Durban City Centre where they seized hundreds of medicines, medicinal creams and tablets that were deemed counterfeit and were being sold illegally in the local market. The officers swooped on 20 shops in and around Anton Lembede Street (Smith Street) and Dr Pixley KaSeme Street (West Street) in the city centre. The teams discovered several counterfeit pharmaceuticals, including items such as painkillers and

several bottles of counterfeit and expired cough syrup. Other seized items included topical creams such as Lenovate, Persivate Salve, and Movate and lifestyle pills such as Viagra, as well as several versions of weight loss pills. Included in this raid were 140 bottles of the highly addictive cough mixture *Broncleer*, which is only provided with the presentation of a doctor's prescription since it is recognised as a prescription drug (Manda, 2020).

- In November 2020, the South African Police Services (SAPS) raided a warehouse in Germiston in Johannesburg suspected of harbouring counterfeit pharmaceutical products. Officials discovered a consignment of packages resembling COVID-19 vaccines, and upon inspection, roughly 2400 doses were found and seized. Among the raided items was a large quantity of counterfeit N95 face masks originating from China valued at around 6 million Rands (Chelin & Moffat, 2021).
- In February 2021, Gauteng police officers seized a consignment of unregistered medicines suspected to be counterfeit and valued at 126 million Rands at the OR Tambo International Airport. Further investigation into the consignment led to the discovery of the so-called COVID-19 treatment drug, *Ivermectin*. This seizure resulted in the arrest of seven individuals for the illegal importation of scheduled medicine (Naidoo, 2021).
- On the 30th of November 2021, the Umkomaas Task team in Durban were informed about a stolen vehicle parked in Roseneath, South of Durban. The task team proceeded to the location of the stolen vehicle, and upon searching the vehicle, they uncovered 246 counterfeit Xanax tablets, 18 bottles of the banned cough syrup *Broncleer*, Stilpane syrup, 11 packets of counterfeit cigarettes and 2 kilograms of cannabis. The 25-year-old suspect was placed under arrest for possession of counterfeit pharmaceuticals and controlled substances (Ngema, 2021).
- In the past 12 months, the South African Revenue Services alone confiscated 207 882 erectile dysfunction pills with an estimated value of 21 million Rands. This seizure uncovered that some lifestyle pills (such as those used to treat erectile dysfunction) can be purchased easily online for only R9. The current cheapest legal version of this pill in South Africa sells for roughly R50 each in pharmacies (Pharma Dynamics, 2021)
- In January 2022, Kwa-Zulu Natal Premier Sihle Zikalala led a delegation through the Bayhead and Maydon Wharf area, where they seized counterfeit pharmaceuticals, totalling roughly 1 billion Rands. Officers from Durban Metro Police, South African Police Services and the South African National Defense Force further investigated the

consignment and discovered various counterfeit items. The consignment contained counterfeit clothing, alcohol, cigarettes, food, Tupperware, and other medical products. The breakdown of the seizure was incomplete at the time of this study; hence, the researcher is unable to provide details on the number and type of counterfeit pharmaceutical products that were uncovered in this raid. In concluding the raid, the Premier declared that South Africa lost about 250 million Rands in tax revenue in the previous financial year due to this illicit trade in the country (Rall, 2022).

Counterfeit pharmaceutical products were initially acknowledged as a global concern by the World Health Organisation in 1985 (O'Hagan & Garlington, 2018). Since then, the extent of the phenomenon has proven challenging to quantify despite the tremendous efforts of several organisations. In the section above, the researcher discussed the extent of counterfeit pharmaceutical products and provided insight into some of the noteworthy global seizures.

To capture the essence of this study, the researcher highlighted recent incidences of counterfeit pharmaceutical seizures in South Africa. While only a few have been elaborated on, the researcher believes that the contemporary incidences emphasise the necessity and aim of this study. In the next section, the researcher will discuss how South African police officers are trained to detect counterfeit pharmaceutical products.

2.3 The training provided to police officers to detect counterfeit pharmaceutical products

The lack of experienced and capable police officers in South Africa is the most significant concern regarding the current policing, prevention and deterrence of counterfeit pharmaceutical products (Mbana *et al.*, 2021). Mbana *et al.* (2021) continue that the training provided to SAPS officers is dreadfully insufficient, and those who were skilled and trained to police counterfeit crime have left the service, thereby creating a space that has not been filled by newly recruited and trained police officers. SAFacts (2022) stipulates that no experience is required to become a customs officer in South Africa. Furthermore, training comprises an 18-week training course that educates officers on sound judgment, perceptiveness, language and leadership skills (SAFacts, 2022).

The researcher shares the sentiment with Inna (2016), who states that customs officers may not be well informed on current counterfeiting techniques and recent advancements in counterfeiting familiar products without adequate training and annual workshops.

Kleygrewe *et al*. (2022) state that training within the SAPS is either formal or informal and typically varies in duration according to the subject being presented. With proper training, officers attend workshops, seminars and conferences where they are educated on current and essential topics that are deemed necessary to that unit and at that point in their training, while informal training refers to training that continues as a result of the officer's daily exposure in the field. While formal training does not mean that all officers in the unit can attend, it does assist officers in gathering knowledge on the latest trends and advancements of crime, which they can share with their colleagues upon their return to their unit. Notably, it is not uncommon that the extent of the crime in the field does not match what was taught during training (Salem, 2019). The author highlights that counterfeiters are constantly advancing their techniques, and while officers learn the latest trends from brand ambassadors and patent attorneys, they may find counterfeit items in a completely different form from what was shown to them in their training. Salem (2019) further highlights that if training is not conducted regularly in particular developing countries, officers may search for a specific item without knowing that counterfeiters have already changed its appearance or packaging.

This is the loophole that counterfeiters are aware of and use to their benefit. Inna (2016) further elaborates that to produce excellent customs and police officers, the initial training they receive must be supplemented annually so that the officer remains polished in their duties despite the number of years of being in service or in the force. Regular training ensures that officers are updated with advancements in counterfeit crime and that new counterfeiting techniques are addressed. At the time of this study, the researcher searched through several literary works to find information on how police officers are trained to detect counterfeit pharmaceutical products in South Africa. Despite an extensive search, information on police and customs officers training was unavailable. The researcher is of the opinion that such information is inaccessible to the public to protect the training methods of law enforcement agencies. The researcher believes that such information will be revealed during the data collection section of the study. Despite the inaccessibility of information surrounding law enforcement training, the researcher wishes to discuss the policing of counterfeit crime in South Africa.

Mackenzie and Hamilton-Smith (2011) state that proactive policing of counterfeit products relies heavily on identifying counterfeited items. Small handheld detection tools are required and relied on to assist with proactive policing. Detection tools, such as detection pens, portable ultraviolet lights and scanners, are necessary but expensive, especially in third-world regions. In a developing country, such as South Africa, finances would typically be set aside for more

pressing areas of policing (such as hiring more police officers); hence, such tools and equipment would take longer to procure than in a developed country like America (Mackenzie & Hamilton-Smith, 2011). It is also to be noted that the existing limited funds provided to policing are often utilised to hire additional officers or to train law enforcement officers further to police counterfeit crime. Naturally, these devices do not ensure that the prevalence of counterfeit products in the country will cease. As technology enhances, so does the methodology of counterfeiters. Soon and Manning (2019) state that a multi-agency approach is imperative to deal with counterfeit crime effectively.

According to Soon and Manning (2019), this may mean that policing responsibilities for counterfeit crime detection and deterrence should be shared by public and private law enforcers to identify counterfeit products. Marx (2019) reaffirms the importance of public law enforcement officers working alongside private individuals or companies specialising in counterfeit crime. The author adds that the public-private partnership in policing counterfeit crime is evident when brand owners hire private investigators to locate counterfeiters and counterfeit products (Marx, 2019). The author continues that public law enforcers, when paired with private entities such as lawyers and brand ambassadors, can collaborate more coherently, thus ensuring quicker apprehension of counterfeiters and the immediate confiscation of counterfeit products.

Additionally, the inclusion of brand ambassadors in police training workshops and conferences takes officers one step forward in being able to fulfil their duties when working with counterfeit products (Fatokun, 2016). The author continues that brand ambassadors provide precise and current clarification on their products and ensure that officers can note changes in their original and current designs to identify counterfeit versions of the brand. The assistance of brand ambassadors not only helps officers identify differences between a product's original and counterfeit versions but also brings to light which items are most likely to be counterfeited due to their recent demand or popularity (Marx, 2019).

Intelligence-led policing is significant in tackling counterfeit crime (Ratcliffe, 2016). The author continues that collecting relevant intel and developing steadfast strategies relating to the threat of counterfeit crime prove to be rewarding to law enforcement during the apprehension of counterfeiters (Ratcliffe, 2016). The power behind this form of policing is its capability to integrate problem-solving policing, information sharing and police liability with enhanced, intensified police operations (Joyce & Laverick, 2021). Joyce and Laverick (2021) state that

intelligence-based policing applies tactical intelligence about an impending threat to establish and use preventative measures and operational intelligence to successfully approach future long-term threats.

Clandestinely, information on counterfeiters is collected and evaluated (Abid & Abbasi, 2014). The author explains that this type of intelligence collection would typically be unavailable to investigators through overt sources. This information is then relayed to the local police and other relevant law enforcement officers for further analysis and investigation, possibly leading to crime detection or crime prevention. Blackstone and Hakim (2013) state that intelligence involves incorporating and assessing the data that is methodically collected on individuals or businesses that are suspected of being involved in counterfeit crime and then using that intelligence to conduct a successful raid of the counterfeited products to eventually lead to the apprehension of those responsible for the manufacture and distribution of those items. The authors further elaborate that this method of intelligence-led policing forms the foundation for a structured, analytical framework towards an identified area of concern (Blackstone & Hakim, 2013).

South Africa has a gap between progressive policies and their implementation to address problematic areas (Mogstad *et al*., 2016). This is often the result of the lack of efficient policy implementation and poor service delivery in South Africa. As Burger (2015) argues, the inability of the South African Police Service (SAPS) to perform its duties effectively contributes to the prevalence of counterfeit crime. The country's current weakness in policing counterfeit crime has driven its increased prevalence (Hoeyi & Makgari, 2021). The majority of SAPS officers are not skilled or trained on how to police counterfeit crime. A limited number of officers are assigned to the Directorate for Priority Crime Investigation (DPCI) unit of SAPS (this unit is also commonly known as the Hawks).

Customs and Excise officers and the Department of Trade and Industry (DTI) officials also form part of the group of enforcers who can curb counterfeit crime in South Africa. Other than these officials, who are not many, South Africa has no special unit mandated to police only counterfeit crime. Hoeyi and Makgari (2021) state that the minority of police officers trained in counterfeit crime is further complicated by the loss of dedicated officers to undertake preventative and proactive measures towards counterfeit crime, thus leading to lethargy among the remaining officers. It is perhaps possible to undertake that South African policing against counterfeit crime, particularly counterfeit pharmaceutical crime, has gradually declined. The

remaining officers are far too stretched in their duties to exhibit any real difference in the nationwide prevalence of counterfeit crime (Burger, 2015). The researcher shares the sentiment with Burger (2015) that the proportion of counterfeit criminals to trained police officers in South Africa is vastly disproportional, hence counterfeiters' ability to improve their strategies continuously. While the researcher will elaborate on recommendations later in the study (*see Chapter 7)*, she wishes to highlight that frequent training and further recruitment of police officers, customs and excise officers and DTI officers will greatly influence the war against counterfeit pharmaceutical products in South Africa.

South Africa possesses an incoherent group of law enforcement agencies tackling counterfeit crime. Such fragmented agencies, such as the SAPS border control and DPCI, customs and excise officers and DTI officers, have their distinctive functions in policing counterfeit crime, which aligns with the independent training that each agency provides to its recruits (Hornberger, 2018). The DPCI and DTI officers serve the function of policing counterfeit goods that have already entered South Africa through the borders. The DPCI is also responsible for tackling sophisticated and complicated commercial crime (counterfeit crime). The DPCI employs a prosecution-guided rather than a prosecution-led investigation to address crime (Stuurman, 2020). Stuurman (2020) explains that the DPCI can utilise this technique due to its capacity and skills attained over time. SAPS border control police officers follow a mandate to guard and protect South African borders. This ensures that counterfeit products cannot pass through the borders. Customs and Excise officers follow a mandate from the South African Revenue Services (SARS) to ensure that only authentic products are imported into South Africa and to maintain the relevant levy for the sale of such products in the country.

The various organs to combat counterfeit crime in South Africa exist, but with limited resources and declining skilled manpower, counterfeit pharmaceuticals are still making their way into South African markets (Cartright & Barić, 2018). The researcher shares the views expressed by Cartright and Barić (2018), which explain that the surge of good quality counterfeit pharmaceuticals makes it difficult for law enforcement officers to detect without the assistance of laboratory tests/forensic tests of the product's authenticity. The restricted access to such tests adds greater exertion on law enforcement, thus highlighting the cycle of limited policing, restricted training, resources and manpower in developing countries such as South Africa.

According to Thenga (2021), a concern in policing counterfeit crime is the weakness in policing strategies by SAPS. SAPS employs a reactive policing approach to police counterfeit crime,

meaning that police officers only take action against counterfeiters when a brand owner has reported that his product is being manufactured as a counterfeit. The DPCI investigators depend greatly on tip-offs and complaints from brand owners. Whilst the DPCI investigators have the authority to search and seize with or without a warrant, they hesitate to conduct a raid without a warrant as they will have to prove the existence of reasonable suspicion to condone their raid. Suppose the raid is not confirmed by the local magistrate or judge whose jurisdiction the raid was conducted in. In that case, the police must return the goods to the person(s) or company they were seized from and replace any goods damaged during the raid under Section 4A of the Counterfeit Goods Act 37 of 1997 (n.d, online). This is due to the negative effects of raids on the sale of the goods that become subject to the raid (Thenga, 2021). Reputational damage, personal image assassination, halting of business and distrust in the eyes of the customer are some of the negative effects police officers aim to avoid. It also negatively impacts the police officers if they conduct a raid that does not prove fruitful. Makondo *et al.* (2021) state that South African police officers do not conduct random raids or sting operations due to the litigation that may follow if they happen to assume incorrectly about suspicious, unauthentic goods. To support the statement by Makondo *et al.* (2021), Dereymaeker (2015) reports that the pending civil claims against SAPS during 2014/2015 stood at a shocking R26 billion. This figure results from SAPS's lack of professionalism and legislative compliance (Dereymaeker, 2015). SAPS officers who did not receive proper training on identifying counterfeit goods and counterfeit crime only exacerbate this problem.

Maguire and Johnson (2010) argue that poor policing of counterfeit goods is exasperated by law enforcement officers' inability to use proactive intelligence in dealing with counterfeit crime. Mohamed and Wahid (2014) explain that SAPS officers do not follow the proper chain of command when processing counterfeit goods and often exclude the brand owner when testing the authenticity of the goods. In this instance, brand owners often consult with private investigators to ensure that the correct chain of events is taking place and to do their policing and investigation of counterfeit goods (Mohamed & Wahid, 2014).

Policing against counterfeit crime in South Africa possesses the weakness of existing corruption and enforcement strategies that do not unite the police, policymakers and the relevant parts of government to create a harmonised approach towards counterfeit crime (Kempen, 2018). Kempen (2018) states that several law enforcement agencies, such as SAPS and customs officers, work in isolation instead of combining their strategies to achieve a more significant deterrent towards curbing counterfeit crime. Consequently, this has a ripple effect

in executing a mandate when little to no communication occurs between the relevant organisations in charge of policing counterfeit crime (Geldenhuys, 2019). Geldenhuys (2019) maintains that this is further amplified by the lack of trust between the police and communities, thus resulting in a detachment between both parties. Community policing and the lack of intelligence from community leaders is also a result of the detachment. Blair *et al.* (2021) confirm the statement made by Geldenhuys (2019) by stating that in a large-scale experiment conducted in the Southern Hemisphere of Africa, community policing practices did not lead to an improvement in citizen-police trust or greater citizen cooperation with the police and neither did it result in a reduction of crime.

In developing countries such as South Africa, resources, training, and manpower are often limited (Cartright & Barić, 2018). Proactive policing techniques and intelligence-led strategies are sometimes incoherent among law enforcement agencies, hindering curbing counterfeit crime's prevalence. Policy implementation and service delivery also pose concerns for law enforcement in South Africa (Stuurman, 2020). While details on the training of police and customs officers in South Africa are elusive, the researcher discussed the policing of counterfeit crime in South Africa. In the following section, the researcher will discuss the limitations within the current South African legislature relating to counterfeit crime.

2.4. The limitations that exist within the current South African legislature relating to counterfeit crime

According to Thenga (2018), South Africa has several legislative frameworks that criminalise counterfeit and intellectual property crimes. Some of these include The Counterfeit Goods Act 37 of 1997 (n.d, online), The Customs and Excise Act 91 of 1964, The Medicines and Related Substances Act 101 of 1965, The Prevention of Organised Crime Act 121 of 1998 and The Criminal Procedures Act 81 of 1997. The author further explains that all South African legislature is grounded by the Constitution of South Africa Act 108 of 1996, which governs all other legislation (Thenga, 2018). The results of a study conducted by Moshoeshoe *et al.* (2022) explain that the current legislation that South Africa maintains is compatible with international standards. The authors include that the laws identified for counterfeit crime are stringent and well-established over time.

As listed above, several legal frameworks exist to cater for the criminalisation of counterfeit products; however, the researcher has chosen to discuss the following legislature:

1. The Counterfeit Goods Act 37 of 1997 (n.d, online)
2. The Customs and Excise Act 91 of 1964
3. The Medicines and Related Substances Act 101 of 1965

In this section, the researcher will discuss the abovementioned South African legislative frameworks relating to counterfeit crime and counterfeit pharmaceutical crime specifically and will highlight the limitations (if any) within these legislative frameworks.

2.4.1. The Counterfeit Goods Act 37 of 1997

The Counterfeit Goods Act 37 of 1997 was passed to combat the trade in counterfeit goods specifically. It is the only Act in South Africa that criminalises counterfeit crime, allowing law enforcement officers to surveillance and arrest counterfeiters. According to Thenga (2018), before the Counterfeit Goods Act 37 of 1997 (n.d, online), the only legislation available to prosecute counterfeiters were the Merchandise Mark Act No. 17 of 1941, the Copyright Act No. 98 of 1978 and the Trademarks Act 194 of 1993. However, these Acts lacked effective mechanisms to combat all counterfeit categories, which led to the development of one Act, the Counterfeit Goods Act 37 of 1997 (n.d, online), to allow the inclusion of all the above Acts under one (Thenga, 2018). The Counterfeits Goods Act 37 of 1997 protects and enforces intellectual property rights by permitting civil and criminal resolution against those counterfeiters apprehended by law enforcement.

The purpose of the Counterfeit Goods Act 37 of 1997 is to enable owners of registered trademarks and copyrights to take action against those counterfeiting, cloning or impersonating their products and to allow for streamlined and effective enforcement measures to protect their brand or products (Maguire & Ramara, 2018). The authors maintain that the Act provides copyright and trademark owners to protect the longevity and originality of their products. The Counterfeit Goods Act 37 of 1997 allows law enforcement to inspect and enter premises suspected of counterfeiting (Maguire & Ramara, 2018). Thenga (2018) states that the Act not only empowers law enforcement when apprehending counterfeiters but assists them in facilitating the prosecution process of counterfeiters. The author adds that the Act is prescriptive in providing a clear and concise indication of how to approach counterfeit crime matters.

The Counterfeit Goods Act 37 of 1997 came under scrutiny in the Supreme Court of Appeal in the 2010 case *Puma AG Rudolph Dassler Sport Vs Rampar Trading (Pty) Ltd,* which led to the discovery of some essential findings (Spoor & Fisher, 2011). In the abovementioned case,

it was discovered that counterfeiting is possible without cloning and that counterfeiting requires a deliberate trademark infringement. The case revealed that the fact that the trademark owner has not produced goods of that type does not mean that the goods are not counterfeit.

A significant benefit of the Counterfeit Goods Act 37 of 1997 is that it permits police and customs officials to partake in the investigation and inspection process. The authors continue that a copyright holder can request that officials search premises where there is suspicion that imported counterfeits are being stored. The Act permits such searches and allows officials to seize those goods for infringement proceedings. If goods are detained, the copyright holder must inspect them and confirm if they are counterfeit before lodging a criminal complaint (Spoor & Fisher, 2011).

2.4.1.1. Limitations of the Counterfeit Goods Act 37 of 1997

The Counterfeit Goods Act 37 of 1997 focuses on preventing the trade of counterfeit goods. It protects the copyright owner from having their product cloned or closely impersonated. It also allows police and customs officers to play a role in the proceedings of the counterfeiting case. However, the Counterfeit Goods Act faces the limitation of not being specific towards the category of the product, and in this case, it is not specific to counterfeit pharmaceutical products (Rogerson & Parry, 2020).

The Counterfeit Goods Act looks at *counterfeits* as a complete category and does not consider them in their degrees of severity or harm to people and communities. The Counterfeit Goods Act should provide guidelines for which legal proceedings can follow based on the type of product that has been counterfeited.

The researcher believes that counterfeit products have different effects on human life. For example, counterfeit pharmaceutical products carry the risk of fatality, whereas counterfeit shoes or clothes carry a financial risk. Essentially, the Act should outline penalties for the different categories of counterfeit products (Waldman, 2019). Waldman (2019) further states that not only does this help with determining the correct sentence for the criminal, but it also acts as a deterrent to criminals. By doing this, law enforcement can intensify their search for counterfeit pharmaceuticals since they know the severity of the consequences should such products circulate in the market.

Upon examining the Act, the researcher noted a specific time frame for the parties involved to present certain documentation. To begin with the criminal proceedings, there has to be a document (affidavit) that the brand ambassador has to provide at the onset, whereby he/she lays a formal complaint of the suspicion that the brand has been counterfeited. Failure to receive this official document means that the investigating officer cannot open a case, and the suspected goods will have to be returned to the individual from whom they were confiscated with no charges against them. This is a limitation in counterfeit crime proceedings, as contacting brand ambassadors can be challenging, especially if they do not have an office or representative within the country (Cai, 2020). Furthermore, the Act does not permit law enforcement officers to act on the brand ambassador's behalf, which further stalls the prosecution process. The time frame stipulated within the Act is too stringent for law enforcement to meet when it relates to counterfeit crime matters, posing as a limitation of the Act.

The researcher wishes to highlight that besides the abovementioned limitations, the Counterfeit Goods Act is limited in its enforcement. Law enforcement and customs officials need to have frequent training on the relevant laws so that they can enforce them correctly and strictly. The researcher poses the question: *if law enforcement and customs officers do not fully acknowledge or grasp the contents of the Counterfeit Goods Act, how do they enforce it?* Thus, the Act is not further limited but poorly enacted and insufficiently enforced (Rogerson & Parry, 2020).

2.4.2. Customs and Excise Act 91 of 1964

The Customs and Excise Act 91 of 1964 was passed by Parliament in 1964 and introduced for enforcement on 01 January 1965 (South African Government, 2022). The Act intends to impose a charge for customs and excise duties. In addition, the Act prohibits and controls the importation or manufacture of certain products. Customs duties are imposed by the Customs and Excise Act 91 of 1964. They are levied on imported goods to raise revenue and protect the local market.

2.4.2.1. Customs

Customs fees are calculated as a percentage of the value of the imported goods (as set in the schedule of the Customs and Excise Act 91 of 1964). Certain imported items, such as meat, fish, tea, textiles and firearms, have customs duties calculated as a percentage of the value or per kilogram/meter (SARS, 2021). The basis of determining the correct amount of customs levy is set out by:

- Tariff – tariff classification of goods is one of the more complex issues under the Customs and Excise Act. The tariff book indicates the normal customs duties payable when importing goods into South Africa. Tariff classification of goods also determines the necessity for import control permits and the applicability of any customs rebate provisions (SARS, 2021).
- Value – customs values are set by the General Agreement on Tariffs and Trade (GATT); however, the majority of goods are valued using the transaction value of the goods (i.e. the price paid or the actual price charged for the goods) (SARS, 2021).
- Origin – rules of origin are the criteria that are used to define where a product was made. They form an integral part of international trade rules because of policies that discriminate between exporting countries. The product's origin is used to determine the import duty payable and whether it is subject to any antidumping or countervailing duty. It is also used to compile trade statistics and for *Made in...* labels. Essentially, the origin of a product is important because it will determine how it's treated at the border of an importing country. The origin may impact the import levies payable and the product's admissibility into the country (SARS, 2021).

2.4.2.2. Excise

Excise duties and levies are imposed mainly on high-volume daily consumable products such as petroleum, alcohol, tobacco, electronics, cosmetics, and other non-essential and luxury items. The primary function of the Excise duties is to ensure a constant flow of revenue for the state. The secondary function is to discourage the consumption of certain products, such as those harmful to the environment or one's health. Excise duties are payable by manufacturers of products that fall under the Customs and Excise Act 91 of 1964. Excise levies are payable throughout the Southern African Customs Union (SACU) in Botswana, Lesotho, Namibia, Swaziland and South Africa. Erasmus (2022) states that the Government proposes a yearly increase on excisable products per the Customs and Excise Act. As of 25 February 2022, the following excise products are of relevance (among several others):

- Tobacco and alcohol: The targeted excise taxes on wine, beer, and spirits are 11%, 23%, and 36%, respectively, and 40% on all tobacco products.
- Traditional African Beer: the current excise levy for traditional African beer powder is 34,7c/Kg.

- Vaping: The government proposes to apply a flat excise duty rate of at least R2, 90c/ml, to both nicotine and non-nicotine vaping solutions.
- Fuel and vehicle emissions
- Plastic bag levy: to discourage the use of plastic bags, the Government proposed that the plastic bag levy be increased from 25c to 28c per plastic bag.

According to SARS (2021), excise duty rates have continued to hike above the inflation rate in recent years, leading to a greater tax incidence with no evidence to show that excise product levies will remain steady, and consumers are left without the choice but to limit their privileges. Luxury items in South Africa pose higher tax levies than the actual product itself (Erasmus, 2022). The author continues to state that, in time, the average South African will be unable to purchase products subject to excise levies (Erasmus, 2022).

2.4.2.3. Limitations of the Customs and Excise Act 91 of 1964

The Customs and Excise Act 91 of 1964 is well-developed and excellently maintains a flowing stream of revenue for the country. It promotes local trade and establishes a grounded set of rules for international trade. Noting the above, the Customs and Excise Act 91 of 1964 is hardly limited; it manages and maintains every legal responsibility it sets out to enforce.

Initially, the researcher anticipated that the Customs and Excise Act 91 of 1964 lacked protocols for instances whereby counterfeit products were trying to be brought into South Africa, but upon further research and meticulous reading of the Act, the researcher uncovered that according to the Act, officials may in terms of Section 113A of the Customs and Excise Act 91 of 1964 detain any goods upon importation to ascertain whether the goods are counterfeit as stipulated in the Counterfeit Goods Act. This provision allows customs and excise officers to join law enforcement in the fight against counterfeit pharmaceutical products. The Customs and Excise Act 91 of 1964 ensures the proper importation of goods into South Africa and ensures that suspected counterfeits are properly dealt with and in a manner that upholds the laws that bind the products.

2.4.3. Medicines and Related Substances Act 101 of 1965

The Medicines and Related Substances Act 101 of 1965 is based on the premise that abuse of any medical product or a related medical substance is harmful to human life, and as a result, any individual promoting such abuse is considered to be committing a crime in accordance to the regulations stipulated within the Act. The Act's objective is to provide for the evaluation,

monitoring, regulation, inspection, investigation, registration and control of all medicines, scheduled substances, medical equipment and/or devices, radiation control, clinical trials and other related medical matters.

According to the Act, medicines are classified into schedules and range from schedule 0 to 9, with schedule 0 being medicines such as painkillers that one may obtain over the counter at a pharmacy. Schedule 9 is the strongest form and may only be purchased if prescribed by a medical professional. Schedule 9 drugs are those which can lead to dependency,, such as anti-depressants and tranquilisers. They also include drugs such as heroin and cannabis. The Act's primary function is to prohibit and control the use of such harmful medicines.

In relation to this Act, it permits the judge presiding over the matter to use his reasonable discretion when deciding on sentencing. This legislative framework does not stipulate a clause regarding a minimum sentence, but it does list a maximum sentence,, which is as follows:

- In matters including schedule 7, 8 and 9 medicinal substances, the Act lists a sentence of R100 000 fine or 25 years incarceration (the above-listed schedules are prohibited substances and include cannabis, LSD, amphetamines and several others).
- In matters relating to Schedule 6 medicinal substances, the Act announces a sentence of R50 000 or 12 years incarceration (schedule 6 drugs are still harmful and include narcotic painkillers such as morphine).

Consequently, the lower the class of medicine, the less severe the sentence. While the sentences above appear harsh, it is to be noted that the judge presiding over the case reserves the right to use their discretion during sentencing. In certain instances where it appears that an individual is severely dependent, the judge need not pass the sentence at all, or oppositely, he may pass the maximum sentence should he perceive it necessary. The Medicines and Related Substances Act 101 of 1965 rests on endorsing, encouraging and promoting human health. The Act acknowledges that any individual selling scheduled medicines for profit is committing a crime and should be penalized accordingly. This legislative framework is concerned with the control of substances and not the treatment of individuals who use or abuse medical substances. The Act's main prerogative is to identify and assess the matter and not to provide solutions for the abuse of medicinal substances since other policies are allocated to that function.

2.4.3.1. Limitations of the Medicines and Related Substances Act 101 of 1965

The abovementioned Act is widely and effectively used to assess all matters that pertain to medicines and related substances. It explains how all medicines should be regulated and issued under the specified classes. However, when closely examined and considering the research topic in mind, it is apparent that this Act does not have a specific clause for counterfeit medicines.

The Act regulates the use, abuse, sale, manufacture and distribution of medicinal products, but it does not provide a clear outline of the proceedings for medicines that are counterfeit or substandard. There is limited indication of how law enforcement may use this framework as the premise in their case, as there is no direct enforcement strategy in the event of a matter concerning counterfeit pharmaceutical products.

2.4.4. Comparing the Counterfeit Goods Act 37 of 1997, the Customs and Excise Act 91 of 1964 and the Medicines and Related Substances Act 101 of 1965.

Initially, the researcher anticipated that the Counterfeit Goods Act 37 of 1997, the Customs and Excise Act 91 of 1964, and the Medicines and Related Substances Act 101 of 1965 were comparable to some degree. Nevertheless, upon examining each Act individually, it is evident that they cannot be compared. The Counterfeit Goods Act 37 of 1997 explicitly combats the trade of counterfeit goods and enforces the protection of intellectual property rights, the Medicines and Related Substances Act prohibits and controls the sale of medicinal substances, while the Customs and Excise Act 91 of 1964 regulates the import of goods into South Africa ensuring its authenticity and subsequently, charging the relevant duties for the importation of goods. The Acts cannot be compared as they perform very different functions individually. Instead, the researcher wishes to highlight that the Counterfeit Goods Act 37 of 1997 and the Customs and Excise Act 91 of 1964 work simultaneously. The Customs and Excise Act is in place to prevent the importation of counterfeit products, while the Counterfeit Goods Act prevents the sale of counterfeit products should they somehow pass through customs undetected. The Acts assist one another in the war against counterfeit products in South Africa while each performs their intended function outlined by the government of South Africa (South African Government, 2022).

In the section above, the researcher highlighted the three primary legislative frameworks relevant to counterfeit crime: the Counterfeit Goods Act 37 of 1997, the Medicines and Related Substances Act 101 of 1965 and the Customs and Excise Act 91 of 1964. The limitations were also discussed, and a comparison of the legislature was provided.

Below, the researcher provides a summary of the legislation listed above, noting its implications and sentencing in the prosecution process.

Table 2: Summary of the legislation surrounding counterfeit pharmaceuticals.

Type of legislation	Sentence	Stakeholder	Implications
Counterfeit Goods Act 37 of 1997	**First offence:** ≥ R5000 per item or incarceration that does not exceed three (3) years. **Second offence:** ≥ R10 000 per item with five (5) year's incarceration	SAPS- Commercial Crime Unit	This Act focuses primarily on combating the trade of counterfeit goods and addressing intellectual property rights infringements of all patented or trademarked products, including medicines.
Customs and Excise Act 91 of 1964	Customs duties and taxes	SARS (Customs)	This law imposes a charge for importing products, including medicines, into the country. It prohibits and controls the import or manufacture of certain products.
Medicines and Related Substances Act 101 of 1965	Fines and incarceration dependent on the class/schedule of medicine in question	SAPS and South African Health Products and Regulatory Authority (SAHPRA)	This law ensures the prohibition and control of medicines and related substances to guarantee that they do not harm human life or that they are not abused by criminals willing to profit from the sale of them.

Source: South African Government (2022).

In Table 2 above, the researcher summarises the acts used to regulate counterfeit crime in South Africa. The table lists the sentencing per legislative framework and highlights the

stakeholders of each law. Finally, the table provides a concise overview of the implications of the Acts in the prosecution procedure.

2.4.5. Gaps identified in the legislative framework relating to counterfeit pharmaceutical crime

Upon examining the Acts listed above and the literature relating to it, the researcher identified the main gaps as follows:

1. The absence of harmonisation of the current legislature: the researcher identified the lack of integration between the various stakeholders and noted the need to identify policies most realistic and suited to the South African context. The lack of harmonisation between the various laws provides criminals with loopholes to manipulate during their court proceedings.
2. Jurisdictional restrictions between the various stakeholders prove to be challenging in addressing the technical aspects of prosecutions: to ensure the proper prosecution process, inter-agency collaboration is crucial to strengthen the relationship between the stakeholders so they can work as one entity instead of duplicating their enforcement strategies.
3. Weak regulations about the sale of medicines on the internet: the law focuses on false advertising of medical products and fake labelling of pharmaceuticals, not on the existence of such illegal sites. It does not cater to the requirements of online pharmaceutical registrations and what users should look for when visiting online pharmacy sites.
4. There is a lack of distinct anti-counterfeiting laws to direct enforcement strategies: the lack of such policies means that there is no guiding framework to assist law enforcement with their interaction with counterfeit crime. Officers lack sturdy guidelines for approaching counterfeit matters as their responsibilities are unclear.
5. Unsatisfactory prosecution outcomes due to weak penal sanctions and a lack of political determination to seriously prosecute counterfeit crime matters. The outcomes of proceedings are considered vulnerable due to short timelines and the lack of knowledge on how to deal with a pharmaceutical crime within the South African criminal justice system.

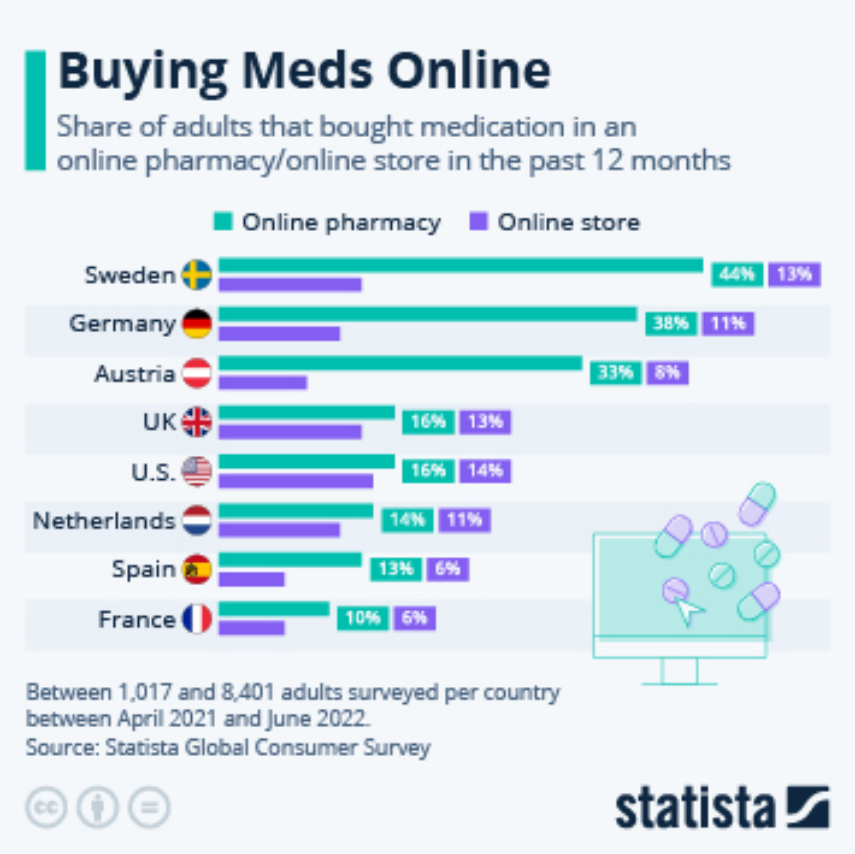
In the following section, the researcher will discuss how the Internet facilitates criminal organisations that utilise the Internet to operate counterfeit pharmaceutical products.

2.5. The facilitation of the Internet by criminal organisations dealing in counterfeit pharmaceutical products.

The increasing and expeditious growth of technology has made several brick-and-mortar businesses into online businesses to the extent that medicines and related pharmaceuticals are available online (Lavorgna, 2015).

Guided by the ideology that online purchases are more affordable and do not require a prescription from a doctor, people are determined to procure pharmaceutical products via the internet. Online purchasing of pharmaceutical products is considered convenient, confidential, and free from the shame and embarrassment of sharing private and sensitive health information with a general practitioner. According to Fincham (2021), a study conducted on the nonmedical use of prescription drugs in Europe depicted that across five countries (Denmark, Germany, Great Britain, Spain and Sweden), online pharmacies with the absence of oversight by a medical professional were a source of obtaining stimulants (7.6%), opioids (4.1%) and sedatives (2.7%). The author highlights another study that was conducted in the Netherlands, which revealed that 10.2% of the population purchased prescription medicines online, with illicit lifestyle drugs (such as Viagra) being the products that they were most satisfied with purchasing (Fincham, 2021).

The individuals who choose to use the internet to acquire medicines are often aware that they can obtain controlled substances from that specific online pharmacy. They are directed to such online pharmacies that appear legal and trustworthy but instead issue scheduled prescription drugs for nonmedical usage (Vanden-Eynde, 2016). However, that is not always the case, especially with illegal online pharmacies, often deemed *rogue pharmacies* (Fincham, 2021). Mackey and Nayyar (2016, 111) define rogue pharmacies as those "pharmacies that either fail to meet national or international regulations or have not been subjected to the requisite regulatory review, license or certification". In 2011, Jena and Goldman published an analysis of the rise of prescription drug abuse in the United States between 2007 and 2014 and its relationship with the availability of such prescription medicines online (Mackey & Nayyar, 2016). When searching for easy access to the four most common medicines (narcotic painkillers, stimulants, anxiolytics and sedative-hypnotics), the study showed that for every 10% rise in internet usage, there was a 1% increase in online purchases of prescription medicines.



Source: Fleck (2022, online)

Illustration 6: A global depiction of the percentage of adults who purchased medicines via an online store and an online pharmacy between April 2021 and June 2022.

The illustration above depicts that people are more likely to purchase medicines via an online pharmacy instead of an online store. This image shows that over 14 months, more people used online pharmacies worldwide than online stores.

The researcher wishes to briefly highlight instances in the existing literature to portray the concern of online pharmacies:

- Monteith and Glenn (2018) studied the ease of purchasing psychiatric drugs online. They used the search term *Buy [drug name] online* to examine 38 frequently used medications, 13 of which are highly addictive. The search revealed 167 pharmacies offering pharmaceuticals for sale, of which 147 (88%) did not require a prescription.
- Monteith and Glenn (2018) examined the accessibility to bipolar disorder drugs via online pharmacies. The availability of two original medicines (Seroquel XR and Abilify) and their generic options (Lamotrigine, Lithium Carbonate and Bupropion SR) were selected to determine their availability online. Of the 30 online pharmacies

identified in the study, 17 (57%) were rated as *Rogue Pharmacies* by LegitScript, an independent internet source verification entity (Monteith *et al.,* 2016). The author further discloses that some of the websites listed credentials that were false and that all the bipolar pharmaceuticals were available online (both original and generic) without a prescription. The study revealed that several medicines contained a formula that was not approved by the Food and Drug Administration (Monteith *et al.*, 2016).

- A study conducted by Mackey (2018) inquired into access to counterfeit diabetes pharmaceuticals via online pharmacies. The author mentions that the expense of diabetes medication and related supplies (such as diabetes test kits) leads to patients looking for a cheaper alternative to obtain the products they require, often counterfeit, to maintain their diabetes. The level of sophistication used by counterfeiters increases the difficulty in detecting counterfeit pharmaceutical products. The author found that the most commonly detected products are oral or injectable diabetes medications, glucose machines, blood glucose test strips and syringes (Mackey, 2018).
- In an operation conducted by Interpol authorities from 92 countries, 113 020 websites and online marketplaces were shut down, the highest number since the beginning of *Operation Pangea* in 2008 (Interpol, 2021b). As part of this operation, Interpol uncovered that a man in Venezuela was arrested after he developed an online platform on WhatsApp to sell counterfeit pharmaceutical products. In addition, Interpol reported that 3 million fake medicines and devices valued at 13 million USD, which were meant to be distributed through online marketplaces, were seized in the United Kingdom (Interpol, 2021b). Authorities also removed 3,100 advertising links for the illegal sale and purchase of counterfeit medicines and shut down 43 active websites. Interpol (2021b) also reports that since the COVID-19 pandemic, counterfeit and unauthorised COVID-19 test kits were responsible for more than half of the counterfeit pharmaceutical products seized in May 2021, which led to 277 global arrests and the seizure of counterfeit pharmaceuticals worth roughly 23 million USD (Interpol, 2021b).

2.5.1. The appeal of online pharmacies

The pharmaceutical trade continues to expand, and when there is a commodity demand, criminals are always eager to take advantage by meeting such demands (O'Hagan & Garlington, 2018).

With the current availability and accessibility to the internet, counterfeiters can establish a greater and more cultured clientele (Hall & Antonopoulos, 2016). With a low production cost,

the profit margin on counterfeit pharmaceutical products is significant. Kennedy (2020) explains that World Finance estimates that about 800 pharmaceutical products will have counterfeit versions circulating globally in less than a decade. Most counterfeiters add a cutting agent (also known as a bulking agent) before the medicines are formed to increase the amount of product that can be sold. The more bulking agents added the less effective the medication becomes. However, the extra available product for sale attracts the counterfeiter as it implies a greater amount of product made and, hence, a greater income made (Kennedy, 2020). The lack of effective counterfeit crime legislation in several countries worldwide heightens the appeal of the counterfeit pharmaceutical trade. South Africa is one of the countries that does not have specific legislation relating to counterfeit pharmaceuticals in general and on the internet (Ngema, 2021). The appeal of using the internet to sell counterfeit pharmaceuticals is that the criminal is safe from detection and can trade with anyone residing anywhere in the world while maintaining their identity and location. They can increase their revenue by using technology, which is commonly and widely available nowadays. The availability of the internet allows individuals to make use of online pharmacies that do not offer the safety of an oversight physician, and if they are not careful, the medicines that they receive may not be authentic despite them paying a substantial amount for them. The main appeal to counterfeiters in using the internet to conduct their illegal business is that they can hide behind layers of digital protection and expand their criminal network whilst profiting from substandard pharmaceuticals regardless of the harm it causes (O'Hagan & Garlington, 2018).

2.5.2. Who uses online pharmacies?

According to Penley *et al.* (2021), the leader of Pfizer's Global Security team, it is estimated that 2 million people in the United Kingdom purchase prescription medication and pharmaceutical products online. In a study conducted by the Medicines and Healthcare Products Regulatory Agency in the United Kingdom with a sample of 2076 adults, 15 % reported purchasing pharmaceutical products online without a prescription from a registered physician (Penley *et al.*, 2021). The internet provides an enticing appeal to various groups of patients.

Despite appreciating the consultation from their usual physician, some patients find the low price and ease of access to online pharmacies to be effortless and convenient. Kennedy (2020) discusses the availability of pharmaceutical products through the use of the internet allows:

- Those with financial difficulties can purchase medication at a price that they can afford without any hidden fees (such as dispensing fees).
- The immobile category of patients, disabled and the elderly, can obtain prescription medication that they require with the addition of it being delivered to their door instead of visiting a doctor (which may not always be possible).
- Individuals who wish to avoid consulting with a physician or with the local healthcare system. This includes patients who seek to procure lifestyle drugs for conditions such as weight loss, balding and male impotence to avoid the embarrassment associated with needing such medicines. This also includes prescription drug addicts who wish to be secretive about their habits or cannot obtain prescription drugs from their usual physician.
- Individuals can purchase pharmaceutical products without a prescription. Some patients wish to maintain the effects of a particular medicine, but a visit to the doctor may result in discontinuing that specific medicine. To avoid this, such patients utilise confidential and unlimited online pharmacies to continue their habit.

2.5.3. How does the internet facilitate criminal organisations dealing with counterfeit pharmaceutical products?

According to Fincham (2021), the Internet facilitates criminal organisations dealing in counterfeit pharmaceutical products by allowing criminal networks to thrive on the Dark Web. Fincham (2021) maintains that the Dark Web is a part of the internet that is not visible and available on a regular search engine as it requires an anonymous browser, known as The Onion Ring (TOR), to be accessed. According to Weimann (2016), TOR is a free, open-source network that allows users to visit any website they wish, with the added benefit of being completely anonymous. In addition, TOR erases the users browsing history automatically after each session and encrypts all the user's search traffic (Weimann, 2016). It also hides the user's IP address, secures online privacy and improves online security by allowing only those who are aware of the site onto it. This means that the user becomes much more difficult to pinpoint, it is almost impossible to locate users browsing the web using TOR. The TOR browser is the only browser that permits the user to access the dark web, where an unlimited amount of illegal activity, drugs, guns and counterfeits are found and sold.

According to Chetry and Sharma (2021), the use of TOR is much related to that of an onion. Just as an onion has several layers of skin, so does the likes of TOR. TOR has several layers of encryption, making it increasingly difficult for law enforcement to track. The inability to

successfully locate criminals that hide behind the dark web inevitably leads to counterfeit pharmaceutical products reaching the person on the other end of the transaction without being detected. The authors state that criminal organisations do not operate singularly; several organisation members are tasked with different parts of the process, from purchasing to receiving counterfeit pharmaceuticals (Chetry & Sharma, 2021). Some members of the organisation ensure that users make the purchase, while others are tasked to monitor their website to ensure that they can operate without police detection. Gehl (2021) informs that with the possibility of law enforcement going undercover on the dark web, criminals still have the advantage of hiding their business and themselves behind layers of encryption that TOR provides. Users may not be detected even if undercover officers attempt to locate them on the dark web, as their browsing history is continuously erased (Gehl, 2021).

In addition to the dark web and the encryption provided to users by TOR, another factor that facilitates criminal organisations through the internet is the lack of an effective cybercrime team in many developing countries. Kshetri (2019, 79) states, "cybersecurity is considered a luxury, not a necessity in many African countries". The importance of cybersecurity has not been adequately emphasised and acknowledged on the African continent. According to Kshetri (2019), cybersecurity budgets in several African countries are reported to be less than 1%, and many countries have not included cybersecurity in their budget. According to a Kenyan Information Technology and Business Advisory firm, cybercrime cost African economies 3.5 billion USD in 2017.

Likewise, the South African Banking Risk Information Centre (SABRIC) reported that South Africa loses 157 million USD annually due to cyberattacks. The researcher wishes to highlight that the lack of cybersecurity and that being known to cybercriminals increases the prevalence of cybercrime. The current study highlights that online pharmaceutical counterfeiters take advantage of selling illicit, counterfeit medicines to individuals in countries they know have weak cybersecurity. Thus, the lack of cybersecurity increases criminals' confidence in using the internet to establish and maintain their illegal trade.

The final reason the researcher wishes to discuss is incapacitating legislation and law enforcement (Kshetri, 2019). Many African countries are distinguished by permissive legislation and law enforcement, creating a visible and fertile ground for criminals. According to a November 2016 report of the African Union Commission (AUC) and the cybersecurity firm Symantec, out of 54 countries on the African continent, 30 countries do not possess

specific legal regulations to fight and prosecute cybercriminals and lack trained law enforcement officers to extract evidence from electronic sources (Holt *et al.,* 2017). The authors state that law enforcement officers in several African countries do not act harshly on cybercriminals. They do not consider cybercrime to be as serious as crimes such as murder and human trafficking. In the feeble legislation and law enforcement category, it is noteworthy that criminals benefit from intra-jurisdictional arbitrage (Holt *et al.,* 2017). Suppose they are unable to participate in cybercrime in one country. In that case, it is easy to cross the border into the West African countries where cybercrime is the least of law enforcement concern. With the lack of robust and well-trained law enforcement officers, counterfeiters continue to run their operations without hassle from the comfort of their homes (Kshetri, 2019). Counterfeiters know that law enforcement in developing worlds like South Africa lacks the manpower and resources to patrol the internet.

Criminal organisations consist of several members aimed to outsmart the law without being detected. The dark web and the encryption provided by TOR, combined with the lack of cybersecurity, cybercrime legislation, and appropriately trained law enforcement officers, provide futile ground for criminal organisations to deal in counterfeit pharmaceutical products through the internet's facilitation. In the next section, the researcher will discuss the factors contributing to the influx of counterfeit pharmaceutical products in South Africa.

2.6. The factors that contribute to the influx of counterfeit pharmaceutical products in South Africa

There are a variety of factors that contribute to the influx of counterfeit pharmaceuticals. Wyld (2008) in Lybecker (2018) provide a concise list of factors contributing to the growing trade of counterfeit pharmaceuticals. The list includes:

1. The profitability of the illegal trade.
2. The affordability of counterfeit pharmaceuticals in comparison to pharmacy retail prices.
3. Public demand.
4. The lack of regulations and criminal sanctions relating to counterfeit pharmaceutical products.
5. Weak border control.
6. The low risk of detection and prosecution.
7. Poverty as a result of unemployment.

8. The ease of transporting pharmaceuticals through borders as a result of corruption and the lack of customs control and police presence at borders.

The researcher will briefly discuss the main motivating factors that encourage the influx of counterfeit pharmaceutical products.

2.6.1. Profitability

The sale of counterfeit pharmaceutical products can be highly profitable and, thus, highly attractive to criminals who are part of organised crime groups (OECD, 2020). A 2017 article notes that counterfeiting prescription drugs can be ten times more profitable than trafficking heroin (Riley, 2017). Riley (2017) further reports that selling counterfeit Viagra (Sildenafil) can be as much as 2000 times more profitable than selling cocaine. Additional evidence is obtained from Fincham (2021), who stated that British security firm *Sophos*, which intercepted millions of counterfeit pharmaceutical adverts and websites, said that it is possible to earn 16,000 USD per day whilst working on taking down a counterfeit network in Russia. However, counterfeit criminals are often members of more than one criminal network, and some have raved about earning 100,000 USD per day.

According to the pharmaceutical company Pfizer, which produced the novel medicine Viagra (one of the most counterfeited products globally), the production of 1 kilogram of heroin has higher costs and lower street value than the respective costs and profits entailed by the production and distribution of 1 kilogram of Viagra (Nawrat, 2019). Nawrat (2019) continues to explain that in one case investigated by the Medicines and Healthcare Products Regulatory Agency (MHRA) in the United Kingdom, 100,000 counterfeit pills imported at the price of 0.25 GBP each were being sold for up to 20 GBP each, translating to a profit margin of 7,900%.

2.6.2. Unemployment and poverty

While the evidence provided in the section above captures the essence of profitability as a push factor for counterfeiting pharmaceuticals, it is necessary to highlight that South Africa's unemployment rate (at the time of this study) of 35.3% motivates individuals to partake in this criminal act for the reason that there are limited sources of obtaining an income as quickly and as effortlessly as selling counterfeit products (Stats SA, 2022). The onset of the COVID-19 pandemic exacerbated the issue of unemployment amongst many in South Africa as most companies retrenched a large percentage of their staff due to the loss of business caused by the pandemic (Morris & Sweeney, 2019). The effects of the pandemic also meant that those still employed were subject to salary cuts or worked on a short schedule, which meant they earned

less money. Since then, many struggled to find secure employment, increasing the poverty margin. The pandemic made individuals desperate to earn money to provide for themselves and their families (Ncube *et al.,* 2021). While most South Africans work a full month to make ends meet, the trade of counterfeiting presents an income that allows for a lifestyle that would take longer to achieve by having a job and earning an honest living. The lack of opportunity presents a difficult path for many qualified individuals, and the prospect of a high income with little effort appears tempting. The risk of selling counterfeit pharmaceutical products is outweighed by the financial benefits of the profits maintained from counterfeiting.

2.6.3. Lack of counterfeit pharmaceutical crime regulations and criminal sanctions

According to Wilson *et al.* (2016), several countries worldwide rely heavily on limited existing legislation to combat counterfeit pharmaceutical crime. Most of the time, this results in the reliance on criminal and intellectual property laws to prosecute counterfeit pharmaceutical crime cases. Several legislative tools are constrained, and regulatory measures are inadequate to manage counterfeit pharmaceutical crime effectively (Wilson *et al.,*2016). Fantasia and Vooys (2018, 264) describe no global system for the "mandatory reporting, assessing and dissemination of information on suspicious and counterfeit pharmaceuticals". The authors further explains that systems exist to detect certain suspicious products, such as suspicious car parts or counterfeit shoes and clothing, but do not detect counterfeit pharmaceutical products (Fantasia & Vooys, 2018).

Interpol (2022) states that instead of examining pharmaceutical crime as a specific category requiring specialised legislation, many countries continue to place it under Intellectual Property Law or use existing criminal law on narcotics or fraud. As a result, many experts believe that countries do not have the legal apparatus to effectively target counterfeit crime. In contrast, others argued that the penalties for counterfeiting pharmaceuticals were far too low for the offence committed.

According to Riley (2017), 30% of countries worldwide do not have a functional regulatory or legislative authority to enforce in the instance of counterfeit pharmaceutical crime. The author further states that it is the international nature of the spurious drug trade that makes counterfeit pharmaceuticals so challenging to hide (Riley, 2017). Aline Plancon, the assistant director of Interpol's program fighting against counterfeit medical products and pharmaceutical crime, reveals that very few of the 196 countries in the world have a specific dedicated service to deal

with counterfeit pharmaceuticals, and others cannot enforce their laws because they do not have the capacity or the budget to do so (Ossola, 2015).

In most countries, prison sentences for the production, manufacture, distribution or storage of counterfeit pharmaceuticals are far less than those applicable to other criminals, such as drug dealers, who may be imprisoned for lengthy sentences and have the proceeds of their crimes confiscated (WHO, 2017). The table below shows the sanctions and maximum incarceration periods for counterfeiting infringement in the BRICS countries.

Item	**Brazil**	**Russia**	**India**	**China**	**South Africa**
Statutory damage	X	≤ USD 72,000	X	≤USD 430,000	X
Administrative, civil fines	X	≤ USD 2,900	X	≤5x Illicit gain	X
Criminal sanctions: incarceration up to	1 year	6 years	3 years	7 years	5 years
Other fines	✓	≤ USD 14,000	≤ USD 2,900	X	≤ USD 650

Source: UNODC (2019)

Table 3: An indication of the sanctions and maximum incarceration for counterfeiting in the BRICS countries.

As indicated in the table above, the maximum sentence for counterfeiting is seven years. In South Africa, five years is the maximum sanction passed on counterfeiters, with the possibility of parole around the time when half the sentence is served. The table also indicates that Brazil, India and South Africa lack statutory damages and administrative civil fines. These countries also have the lowest number of years of incarceration for counterfeiting.

2.6.4. The demand for pharmaceutical products

The shortage of pharmaceutical products is a critical component of counterfeit pharmaceutical crime. It forces consumers and healthcare professionals to search for pharmaceutical products beyond the secure supply chain to obtain the required pharmaceuticals (Chen *et al.*, 2016). The onset of the COVID-19 pandemic in 2020 placed a great demand on basic healthcare products, and with the majority of the world working at limited capacity, the demand remained unfilled. The combination of the reduced supply and increased demand created a niche for counterfeiters to benefit and thrive from. According to WHO (2020), when the supply does not meet the demand, it creates an environment for poor-quality products and counterfeit alternatives to easily fill this loophole. When medicines are in short supply, hospitals and other healthcare service providers explore outside their usual and trusted supply chain to procure the medication. Healthcare providers are often overworked and under tremendous pressure to treat as many patients as possible; hence, the authenticity of medicines is not something they spare time for. Counterfeiters are aware of such situations in hospitals and clinics, and with technology, they can manufacture counterfeit medicines that resemble the original so closely that healthcare providers are unaware of the medicines being counterfeit (Modisakeng *et al.*, 2020). This insertion risks human life and creates an opportunity for counterfeiters to slip counterfeit pharmaceutical products into the healthcare's permanent procurement chain (Chen *et al.*, 2016).

Modisakeng *et al.* (2020) explain that pharmaceutical shortages lead to increased prices for legitimate pharmaceutical products and increase counterfeiters' opportunity and ability to attain financial gain by introducing substandard products into the market. Counterfeiters can take advantage of the medicinal shortages and the demand for them and charge an excessive amount for their products despite knowing they are counterfeit.

According to Modisakeng *et al.* (2020), the cost markup on pharmaceutical products, presumably compared with standard prices, averaged 650%. This sort of absurd markup on pharmaceuticals was evident with the prices of N95 face masks, sterile gloves, antibacterial hand wash, rubbing alcohol and hand sanitiser during the onset of the pandemic. Modisakeng *et al.* (2020) report that hand sanitiser, which usually sells for R15, was priced at R60 at the beginning of the pandemic and that, despite this price hike, stores were sold out of the product. Panic and fear surrounding the pandemic made people purchase various health products and medicines to protect themselves should they contract the virus. The pandemic persuaded people to purchase medicines, regardless of their authenticity, because they could access them during

the lockdown in 2020 without going into the pharmacy to get them. The demand for pharmaceuticals drastically increased at that specific time because people had the perception that they needed certain medicines if they were going to survive the first wave of COVID-19 (Ngema, 2021). Furthermore, those individuals who lost their income due to the pandemic could no longer obtain their chronic medicines via legitimate pharmacies that charge high medical rates and dispensing fees. The demand for easily accessible pharmaceutical alternatives has always existed; however, the pandemic has aggravated this demand and has made people more willing to purchase the alternate version instead of the retail product.

2.6.5. Weak customs and police control

Internationally, customs officials are most likely able to detect potential counterfeit pharmaceutical products before they are released into the country and healthcare workers can spot them should they reach hospitals and clinics (WHO, 2020). However, it is infrequent for either group of individuals to acquire simple field tests, which would greatly assist them in detecting, classifying and identifying suspected counterfeit pharmaceutical products. Sadly, having access to such tests does not necessarily mean customs officials or healthcare workers have the training or time to utilise the kits correctly, allowing undetected pharmaceutical products to pass through borders and infiltrate the healthcare system (Chowdhury *et al.*, 2020).

In an evaluation of the regulatory capacity of 26 African countries, WHO (2017) concluded that these countries could not generally control the quantity, safety, or efficacy of the pharmaceutical products circulating in the market and transpiring into the healthcare system. Detecting counterfeit pharmaceutical products by law enforcement officers and customs officials remains arduous as they have restricted officers and resources to identify every shipment thoroughly. Customs and border control ensure that counterfeit products do not pass through the country's borders. However, corruption and unmotivated customs and border control officers leave plenty of room for counterfeiters to exploit to bring their counterfeit products through the borders. Furthermore, the existing customs and border control officers are already thinly spread to perform other functions, sometimes weakening border control and allowing counterfeiters to pass through the border. In addition, most pharmaceutical counterfeiters use the original packaging of the products they are counterfeiting but manipulate the ingredients of the actual medicine (Fakotun, 2016).

Dégardin and Roggo (2016) analysed 20 samples of suspected counterfeit pharmaceuticals, and all twenty samples had authentic packaging except for one vial that resembled a different

size and shape from the original. Of the twenty samples, three were deemed genuine, and seventeen were confirmed to be counterfeit. While the counterfeit pharmaceuticals were confirmed as counterfeit within one or two days of the initial detection of the shipment being suspected as counterfeit, it took one week to complete a full analysis and compile the forensic report (Dégardin & Roggo, 2016). The authors conclude their study by stating that the lack of customs and border control, trained police officers, detection tools and manpower, and counterfeit detection proves to be a challenge even developed countries face (Dégardin & Roggo, 2016).

2.6.6. Low risk of prosecution

According to WHO (2020), prosecuting for counterfeit pharmaceuticals remains severely low. Most counterfeit pharmaceutical products are detected at a late stage when they have already flooded the market, and by this stage, it is difficult to trace back through the convoluted supply chains or to prove that a crime has taken place. Furthermore, if detected, very few countries maintain the proper legislation to prosecute counterfeit crime correctly. Many countries do not possess a specific legal framework for counterfeit pharmaceutical crime, causing officers to rely on other legislation that does not entirely justify the case. In most countries, investigations are conducted by police officers, some of whom do not have sufficient expertise in the required techniques to prosecute counterfeit crime cases. To complicate the issue further, the nature of the crime often requires cross-border investigation whereby the criminal entities involved have complex ownership structures and use foreign bank accounts.

Difficulties in following the paper trails of the counterfeited pharmaceuticals to trace their original location can be significant as the location of the evidence requires forensic examination of technical gadgets, some of which may be out of the jurisdiction. Language barriers and the lack of cooperation from both criminals and cross border officials may also contribute to hindering the prosecution of counterfeiters (OECD, 2019). It is noteworthy to include that the current day and age warrants a great deal of corruption. In light of this, criminals can get away with crimes such as counterfeiting, which may appear milder than heinous crimes such as murder and rape. Several officers work under strain with little compensation, and complex crimes often take longer to prosecute. The attraction of *quick money* is used by many criminals to blind law enforcement into turning the other way. Sadly, this has become a global trend, thus causing the prevalence of counterfeit pharmaceuticals.

Several factors encourage counterfeit pharmaceuticals. From the extensive list of factors that cause the influx of counterfeit pharmaceuticals, the researcher chose to elaborate on the factors that appear most significant to the study, namely profitability, the lack of regulations and criminal sanctions, public demand, the profitability associated with counterfeit crime; the low risk of prosecution and unemployment and poverty. In the next section, the researcher will explore what public health initiatives South Africa has to protect its citizens against counterfeit pharmaceutical products.

2.7. The public health initiatives South Africa has in place to protect its citizens against counterfeit pharmaceutical products

Counterfeit pharmaceutical products have become a significant area of concern globally. Hartley and Perencevich (2020) state that counterfeiting is a widespread public health problem from which very few are exempt. Faced with the challenges of the prevalence of pharmaceutical crime, policymakers have to develop varying approaches to curbing the issue. Subsequently, developing public health interventions is necessary to protect citizens from the dangers caused by counterfeit pharmaceutical products (Hartley & Perencevich, 2020). In this section, the researcher will discuss some global public interventions as well as the interventions that exist in Africa and conclude this section with interventions that South Africa has in place to safeguard its citizens against counterfeit pharmaceuticals.

2.7.1. Global public health interventions

2.7.1.1. ACTA (The Anti-Counterfeiting Trade Agreement)

In April 2007, a group of countries began working on the negotiations for ACTA. The stakeholders involved aimed to create an agreement representing a futuristic arrangement to combat counterfeiting and piracy (Fadlallah *et al.*, 2016). The documentation provided by the stakeholders validates ACTA's focus on enforcement measures rather than substantive law and sector-specific provisions dealing exclusively with a pharmaceutical crime. ACTA's objective is also to include tools that pharmaceutical companies can utilise to address pharmaceutical crime, particularly in regions lacking or with inadequate legislation relating to counterfeit pharmaceutical crime and crime. According to Fadlallah *et al.* (2016), the current ACTA negotiations are as follows:

Negotiations under the civil enforcement are ongoing over:

- The definition of adequate damages and how to evaluate such damages;

- Remedies, including instances whereby infringed goods ought to be disposed of or destroyed outside the channels of commerce;
- The magnitude of the national authorities power to order injunctions;
- Preliminary measures such as seizure of goods without the necessity of a hearing;

Negotiations under the border measures include:

- Allowing both copyright holders and customs to defer the entry of suspected counterfeit goods at the border and for customs to determine if the goods are indeed counterfeit;
- Strengthening the position of copyright holders regarding the release, forfeiture and destruction of seized goods;
- Relating to the ability of competent authorities to allow copyright holders to provide reasonable security when their goods are involved in counterfeiting;
- Increasing cooperation between customs authorities and copyright holders by ensuring customs authorities disclose information relating to counterfeit shipments of a specific brand to the original copyright holder.

Negotiations for criminal measures include provisions for:

- Criminalising trade in stand-alone labels. This will enable pharmaceutical manufacturers to prevent pharmaceutical counterfeiters from using authentic product labels to legitimise the counterfeit product;
- Elaborate on the extent of infringement necessary to enable criminal sanctions in relation to counterfeiting ;
- Permitting national authorities to take enforcement action on their initiative (also called “ex officio”).

ACTA is a groundbreaking initiative to strengthen international legal frameworks to combat counterfeiting and piracy effectively. Furthermore, the agreement includes unconventional provisions to enhance international cooperation and to encourage strong intellectual property rights enforcement practices. The final ACTA document was signed in May 2011 and is currently regarded as one of the major steps forward towards anti-counterfeiting.

2.7.1.2. The Council of Europe (COE) Convention on Pharmaceutical Crime

The Council of Europe (COE) unites 47 countries and aims to develop common principles essentially based on human rights (Schmahl & Breuer, 2017). Since 2006, the COE has been

working on a proposal for an international agreement motivated towards obtaining cooperation from its member states to combat counterfeit pharmaceutical crime. In February 2009, a group of specialists on counterfeit pharmaceutical products published their first draft, titled the *Draft Convention of the Council of Europe*, on counterfeit medical products and similar crimes that affect public health. The Draft Convention endeavours to address pharmaceutical crime. It applies to medical products, chemical composition, and medical devices (Greer, Gerards & Slowe, 2018). The authors explain that the Draft Convention aims to prevent and combat public health threats by introducing new offences as criminal and strengthening existing criminal sanctions; protecting individuals who have fallen victim to counterfeit pharmaceutical crime by preventing further medical harm to them, and promoting both national and international cooperation toward tackling the counterfeiting of pharmaceuticals. It also allows for a dedicated monitoring mechanism to implement the convention correctly. The Draft Convention criminalises the following actions (if they are deemed intentional):

- The manufacturing of counterfeit pharmaceutical products and their adulteration;
- The falsification of documentation relating to a pharmaceutical product;
- Supplying or offering to supply counterfeit pharmaceuticals;
- Promoting counterfeit pharmaceutical products;
- Illegally trafficking counterfeit pharmaceutical products;
- Being in possession of counterfeit pharmaceutical products or possessing any documentation suggesting any of the above actions.

The Draft Convention specifies that member states must provide for the destruction of any pharmaceutical products resulting from counterfeiting. It further stipulates that any items or machines used in the crime must be seized, and any establishment used to commit the crime must be closed (Polakiewicz, 2021). The Draft Convention was adopted by the European Committee on Crime Problems (CDPC) on the 16th of October 2009. An established convention was signed in February 2010 and is still being utilised to tackle counterfeit crime.

2.7.1.3. IMPACT (International Medicinal Products and Anti-Counterfeiting Taskforce)

WHO established IMPACT to rally awareness against counterfeit pharmaceutical products in 2006 (WHO, 2020). All 193 WHO member states engaged with IMPACT voluntarily. IMPACT unites international organisations, enforcement agencies, national medicine regulatory authorities, customs and police authorities, non-governmental organisations, and associations representing pharmaceutical manufacturers and wholesalers, health professionals,

and patient groups. IMPACT's main objective is to eliminate counterfeit pharmaceutical products from the supply chain in developed countries and to reduce the amount of counterfeit pharmaceutical products in developing countries by two-thirds (Gao, 2018). IMPACT aims to focus on five key areas: legislative and regulatory infrastructure, regulatory implementation, enforcement, technology and communication. According to WHO (2020), IMPACT plans to develop future initiatives covering a review of strategy regarding the exportation of pharmaceuticals, adopt pharmacovigilance systems for counterfeit reporting, and update the 1999 WHO guidelines on measures to combat counterfeit pharmaceuticals. IMPACT also aims to prepare guidelines to combat online counterfeit pharmaceutical crime. However, these guidelines are still being developed.

2.7.1.4. Operation Pangea

In 2008, the Permanent Forum on International Counterfeit Crime (PFIPC) and Interpol initiated "Operation Pangea", the first international operation aimed at illegal advertising, sale and supply of medicines over the Internet (Interpol, 2021b). Operation Pangea correlates enforcement actions by law enforcement, customs and drug regulators across the globe intending to promote public awareness of the endangerment inflicted by purchasing counterfeit and illicit pharmaceuticals and medical devices on the internet. Operation Pangea is conducted yearly with the intent of each operation to build upon the best practices from the previous operations to develop a cohesive and collaborative approach to combat illicit trade worldwide (Interpol, 2020). The Universal Postal Union (UPU) and the World Customs Organisation (WCO) have joined Interpol's efforts toward combating counterfeit crime. The objectives of Operation Pangea are to:

1. Safeguard public health;
2. Raise public awareness of the harmfulness caused by ingesting counterfeit pharmaceuticals;
3. Seize counterfeit pharmaceuticals to remove them from the circulation market;
4. Identify the manufacturers of counterfeit pharmaceuticals and the criminal organisations that support them;
5. Shut down illicit websites that are selling counterfeit pharmaceuticals in an attempt to locate those responsible for the illicit website;
6. Prosecute counterfeiters in a manner that is fitting for the crime and, where appropriate, seize their assets and fraudulent goods;

7. Strengthen the cooperation among several agencies to target the trade of counterfeit pharmaceuticals.

Operation Pangea is a perfect example of inter-agency coordination that has resulted in success (Interpol, 2020). Operation Pangea VII included nearly 200 enforcement agencies from roughly 111 countries. The operation targeted individual criminals and criminal organisations that operated on a virtual platform to sell counterfeit pharmaceutical products. Operation Pangea resulted in 237 global arrests and seized 9.4 million counterfeit pharmaceutical products.

Furthermore, the operation removed 19,000 advertisements for illicit pharmacies from social media platforms, more than 10 600 websites were shut down, and 1235 investigations were initiated. In 2021, Operation Pangea resulted in seizures of illicit and counterfeit medical products valued at almost 23,414,483 USD.

In addition to the seizure, 113,020 websites were removed, the highest number since the initial seizure during Operation Pangea in 2008 (Interpol, 2021). Over the past decade, 11% of pharmaceutical products sold online were deemed counterfeit by officials working on Operation Pangea. The most significant amount of seizures under Operation Pangea were erectile dysfunction medicines. Officials working on Operation Pangea stated that other discovered and seized pharmaceuticals included anabolic steroids, anti-depressants and pharmaceuticals used to treat diabetes, hypertension and cancer. According to Interpol (2021), since 2015, the types of illicit medicines seized have become more multifarious, including pharmaceuticals such as hypnotics, sedatives and anti-depressants. Findings from the disparate phases of Operation Pangea revealed that criminal organisations are advancing their techniques to avoid detection, such as developing complicated shipping routes and dispatching counterfeits in smaller quantities through varying transportation avenues (Interpol, 2021).

2.7.2. Public Health Interventions in Africa

2.7.2.1. Nigeria's NAFDAC

One of Africa's most distinguished interventions against counterfeit pharmaceuticals is that of Nigeria and its National Agency for Food and Drug Administration and Control (NAFDAC). The agency is a pioneer in the fight against counterfeit medicines in West Africa (Awodele *et al.*, 2018). The author explains that NAFDAC was established in 1993 and amended in 1999 when it became the National Agency for Food and Drug Administration and Control Act. The Act warrants the Agency to regulate and control the manufacture, importation, exportation, distribution, advertisement, sale and use of food, pharmaceutical drugs, cosmetics, medical

devices and other regulated products (Awodele *et al.*, 2018). NAFDAC's vision is to be a renounced regulator that ensures safe and quality food, pharmaceuticals, and regulated items attainability. The agency's mission is to protect and promote public health by implementing a constructive and systematic regulatory system that ensures that only the correct regulated items are manufactured, exported, imported, distributed, sold and used.

NAFDAC's endeavours to combat counterfeiting in Nigeria began with a single strategy of restricting the influx of pharmaceutical products to only two airports and two seaports, each monitored by NAFDAC officials. This strategy led to discovering multiple Chinese and Indian pharmaceutical manufacturers suspected of producing and exporting counterfeit pharmaceutical products in Nigeria. NAFDAC terminated the import of the suspected items and constituted private contracts with official regulatory authorities in China and India to administer safe and precise medical exports into Nigeria (Acri & Lybecker, 2018).

2.7.2.2. The African Medicines Agency (AMA)

In 2019, a unanimous decision was taken by the African Union Assembly to acquire a treaty to establish an African Medicines Agency to create a path towards enhancing regulatory supervision and promoting access to safe and affordable medicines on the African continent (Ncube, Dube & Ward, 2021). AMA's vision is to allow African people to access authentic and affordable medicines and medical devices without jeopardising their health and their family's health due to affordability.

The agency's mission is to provide leadership in generating a legalised regulatory environment for the pharmaceutical sector in Africa to flourish and provide equal accessibility to healthcare for the entire African continent. The AMA serves six main functions, which are as follows:

1. Marketing authorisation: the AMA is responsible for the assessment and governance of the selected pharmaceutical products used for the treatment of priority illnesses identified by the African Union;
2. Inspection: The AMA undertakes the management of inspections of manufacturing sites and shares information regularly on all products that have been authorised or permitted for marketing;
3. Market surveillance: the AMA is responsible for coordinating the collection and distribution of information relating to all authorised medical products;

4. Oversight of clinical trials: the AMA will supervise and manage the review of applications received for conducting clinical trials. The agency must also assess "highly complex" product documentation;
5. Quality control: the AMA shall coordinate and network quality control laboratory services for national and regional regulatory authorities;
6. Safety monitoring: the AMA is responsible for making regulatory decisions concerning medical products chosen to treat priority illnesses such as malaria and TB. In addition, the agency will gather and store information on the quality and safety of medical products and share them with member states and globally. It will also establish a network in the regional centres to monitor the safety of medical products.

The AMA can become one of the most efficient and modern medical regulations globally. To achieve this, they require more support from recognised African countries. Currently, 27 African countries have yet to sign the treaty despite the efforts of the Agency's director. South Africa, Kenya and Nigeria are among the 27 countries stalling the AMA's harmonisation initiative (Ncube, Dube & Ward, 2021). The AMA is confident that many of these countries will sign the treaty since the onset of the COVID-19 pandemic, but confirmation remains unknown.

2.7.3. Public health interventions in South Africa

2.7.3.1. South African Health Products Regulatory Authority (SAHPRA)

The South African Health Products Regulatory Authority (SAHPRA) was established in May 2017, and shortly after its establishment, in February 2018, SAHPRA replaced the Medicines Control Council. SAHPRA's mission is to "safeguard public and animal health by licensing of safe, effective and good quality medicines, medical devices, radiation devices and radioactive materials. Further, to monitor clinical trials, maintain vigilance and ensure regulatory compliance of health products in South Africa" (SAHPRA, 2020, online). SAHPRA's vision is to be an agile, conscientious, socially transformative and globally positioned health products regulator with a sustainable positive impact on the long and healthy lives of all those living in South Africa. SAHPRA's core values are care and service excellence, unity of purpose, transformation, innovation, ethics and integrity. The researcher wishes to expand on each value as follows briefly:

1. Care and excellence entails caring for the society and the environment while considering its impact on individuals, valuing good work ethics, and striving towards service excellence in the medical field.
2. Unity of purpose includes cultivating an environment where all contributions are valued, everyone is treated equally and fairly, and all diverse viewpoints are heard.
3. Transformation: this requires working with academic and training agencies to identify new opportunities for regulatory science training to allow for further medical advancement in South Africa.
4. Innovation includes creating an environment for solid, ethically sound medical research to advance pharmaceutical treatments in South Africa.
5. Ethics and integrity: This requires working with integrity and responsibility to ensure that advancements are accurate and that the best is put forward to ensure the proper health of South Africans.

SAHPRA also has a range of criteria for which it is medically responsible in South Africa. SAHPRA's responsibilities include:

- The regulation (monitoring, investigating, evaluating, inspecting and registering) of health products intended for human and animal use;
- Licensing of manufacturers, wholesalers and distributors of medicines, medical devices and radiation-emitting devices;
- The proper conduct of clinical trials;
- To ensure improved access to essential medicines, vaccines and medical products through better supply chain equipment and machinery management.

In 2020, SAHPRA established their critical objectives for five years (2020-2024) to stabilise SAHPRA as a fledging entity that values the health of all South Africans and to ensure the protection of individual's proper healthcare. The key objectives identified are:

- Ensure effective financial management, governance and alignment of budget allocation with strategic priorities;
- Achieve and maintain financial stability through revenue generated and enhanced operational efficiencies;
- Consistently meet the needs and expectations of all SAHPRA's stakeholders;
- Value South African citizens, their accessibility to health care and their health;

- Achieve and maintain high levels of regulatory operational efficiency and effectiveness, delivering to its stakeholders timeously and ensuring safe and quality medical products;
- Create a culture of excellence while ensuring that SAHPRA's people are valued;
- Attract and retain superior medical talent to progress the medical field in South Africa and for South Africans;
- Promote observing and upholding organisational values and culture to advance business objectives and reputation.

SAHPRA is the only current health regulatory board in South Africa that aims to educate the public on counterfeit medicines. Despite conducting a rigorous literature search, the researcher could not locate other public health interventions to protect South Africans against counterfeit pharmaceuticals. The researcher believes that the lack of financial resources restricts South Africa from maintaining multiple public health interventions that are more focused on public awareness and educating communities on the dangers of consuming counterfeit medicines (Titong, 2021). In addition, law enforcement officers and members with a strong medical background are often stretched in their daily duties, leaving little to no time to focus on public awareness campaigns.

Are you aware of the presence of fake medicine in this country?

By fake medicine, we mean a product that looks like the real one but doesn't provide the same effect and could even have bad side effects.

	% Yes	% No
Cameroon	91	9
Sierra Leone	83	15
Nigeria	83	17
Liberia	79	20
Ghana	74	25
Mali	74	25
Central African Republic	72	26
Burkina Faso	71	28
Uganda	70	29
Zimbabwe	69	30
Tanzania	66	34
Senegal	65	35
Kenya	63	36
Niger	62	38
Chad	58	42
Botswana	32	67
South Africa	25	75

Data collected in 2010.

GALLUP

Source: Ogisi (2011)

Illustration 7: Percentage of counterfeit pharmaceutical awareness in 17 African countries.

In Illustration 7 above, Ogisi (2011) reveals the percentage of counterfeit pharmaceutical awareness in 17 African countries. South Africa lists the highest percentage of unawareness (75%) compared to the other 16 countries in the survey. The researcher chose to include this image as it demonstrates the situation in South Africa and depicts the severe need for awareness campaigns on counterfeit pharmaceuticals in the country. Although the above illustration shows awareness of counterfeit medicines in 2010, there has not been another analysis, such

as the one above, to impede the awareness of counterfeit pharmaceuticals, which has improved since the above study. For this reason, the researcher chose this image to highlight that despite advancements in South Africa over the years, there has yet to be a public health intervention that creates awareness of counterfeit medicines, especially in rural areas.

The researcher believes that the lack of education and information on counterfeit pharmaceutical products inevitably leads to the subsistence of counterfeit pharmaceuticals. The less that individuals know about the harm that they cause, the more likely they will be to purchase counterfeit versions of medicines in the event of being sick, as the counterfeit version is often much cheaper than the original and more accessible to obtain than having to go into a pharmacy (Durojaye, 2022). In a survey conducted by SANOFI in 2018 with 2519 participants, 97% of participants expressed that they believe that they did not know enough to protect themselves against counterfeit pharmaceuticals despite most of the participants being aware that such products existed and 44% coming across counterfeit medicines (Titong, 2021). The lack of public health interventions continues to place individuals in danger, and the current regulatory authority does not focus on public awareness and education, thus leaving citizens exposed to counterfeit medicines (Durojaye, 2022). At the time of this study, the researcher could not locate any upcoming developments in public awareness interventions relating to counterfeit pharmaceuticals in South Africa.

2.8. Conclusion

In concluding this chapter, the researcher has searched for literature that directly addresses the objectives of the study. The literature review was structured according to the study's objectives so that the researcher may approve, disapprove or augment the existing literature against the current study's findings. The review of the existing literature has given the researcher an idea of what has been learnt regarding the research phenomenon and what aspects of the topic are yet to be covered. In this chapter, the discussion centred on the extent of counterfeiting globally, on the African continent and then zoomed into South Africa. It looked at the training that customs and law enforcement officers receive and the existing legislature relating to counterfeit crime and its limitations (if any). This chapter discussed how the internet facilitates criminal organisations dealing in counterfeit pharmaceutical products and the factors that cause an influx of counterfeit pharmaceuticals. Lastly, this chapter discussed the public health interventions in place to protect citizens against counterfeit pharmaceuticals in South Africa. In the following chapter, the researcher will discuss the theoretical underpinning of the study.

CHAPTER 3: THEORETICAL FRAMEWORK

3.1. Introduction

This chapter describes the theoretical framework underpinning the study. This study employed criminological theories to explain the occurrence of counterfeit pharmaceutical products in South Africa. The criminological theories are the fundamental theories upon which this study was constructed. The rationale for choosing these theories was based on the belief that it is almost unattainable to find a single theory to explain the occurrence of a specific phenomenon, such as the counterfeiting of pharmaceutical products. The amalgamation of these theories assists by supplementing the limitations of a single theory. In this chapter, the researcher will briefly discuss African theories' theoretical limitations (existing gaps) in explaining phenomena from a cultural perspective. The researcher will then discuss the theories used in this study and their relevance in explaining the phenomenon under study.

3.2. Prevailing Disparities in African Theories

According to Ovens and Prinsloo (2010), criminologists in criminological assessment and profiling often must depend on European or American paradigms to form the basis of their findings and conclusions. Despite the vast amount of theories available, criminologists still experience difficulty in explaining the causes of crime from an African perspective. African criminological theories are primarily based on Western views and explain crime and criminality from a Western perspective. Minimal attention has been attributed to the development of African theories, and this limitation creates a drawback for African research. The authors mention that in a culturally diverse environment, it is necessary to acknowledge that culture plays a significant role in how we think and behave culturally, in which case Westernised theories may be ineffective in explaining some phenomena. Prinsloo and Ovens (2011) explain that despite several studies, information from an African criminological perspective remains limited, thus making it challenging to explain certain phenomena in Africa.

Ovens and Prinsloo (2010) continue that in the development of African theories, academics must consider and avoid making generalisations as well as any attempts to explain a phenomenon from a Western perspective since it does not capture the cultural factors of crime. The authors state that a clear understanding of African phenomenology should be the underpinning for interpreting criminality in African societies.

The development of African paradigms should allow for flexibility, growth and change influenced by time and cultural advancement within African communities. Accepted African paradigms should be further examined and researched by social scientists. Nevertheless, matters surrounding ethnicity, plurality of cultures and unanimism further impede the development of criminological explanations of crime. The authors suggest that cultural orientation further influences social dynamics in African societies, which must be considered in developing African paradigms (Prinsloo & Ovens, 2011). When the researcher reviewed the literature for this study, she encountered the same shortcomings and limitations when finding an appropriate criminological and/or victimological theory that could best explain counterfeit pharmaceutical crime using an Afrocentric perspective. The existing victimological theories do not apply to a study of this nature; hence, the researcher has opted to use criminological theories to explain the phenomena of counterfeit pharmaceutical products.

When examining research conducted on counterfeit crime in South Africa, it becomes evident that the primary disciplines, such as medicine, psychology and policing, have a major input in research surrounding counterfeit pharmaceutical products (Spitzer, 2014). Due to the need for criminological research and the astounding figures surrounding counterfeit pharmaceutical products, a study such as this is necessary. Zarah (2022) states that through research, humans can develop the need for further knowledge about a specific phenomenon. The researcher aims to further research on counterfeit pharmaceutical crime so that the knowledge gained through this study can be used to influence further research on the phenomenon in South Africa.

3.3. Theoretical overview of counterfeit pharmaceutical products

The researcher used the theories in the diagram below to explain counterfeit pharmaceutical crime in South Africa. These theories are the primary theories upon which the research is constructed. The rationale for choosing these theories is that they are the most appropriate theories to explain the occurrence of the research phenomena. The combination of both theories helps to fulfil the shortcomings of other theories. Below, the researcher provides a discussion of each theory and their relevance to the study.

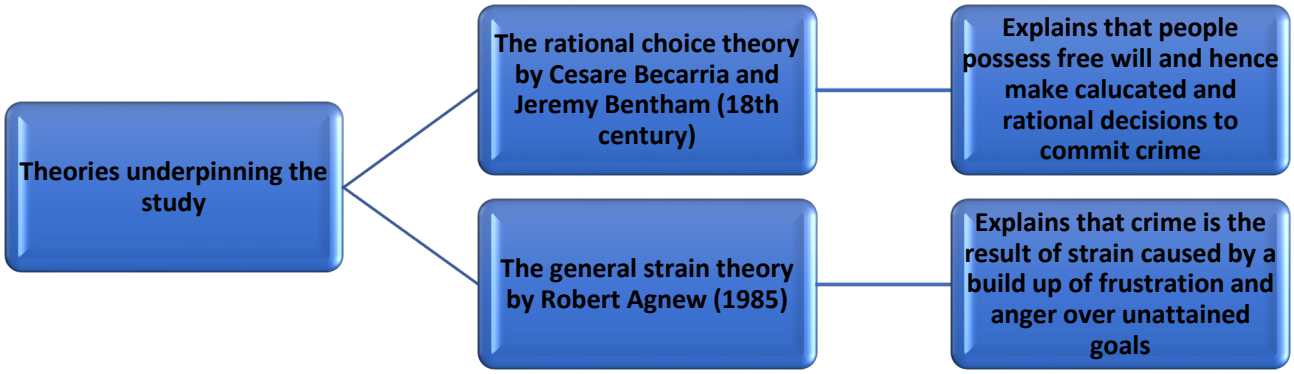


Illustration 8: Theoretical Framework

3.3.1. The rational choice theory

The rational choice theory was developed in the late 18th century by enlightenment scholars Cesare Beccaria and Jeremy Bentham (Ogu, 2013). The foundation of the rational choice theory originates in Cesare Beccaria's 1764 essay *On Crimes and Punishments* and Jeremy Bentham's 1789 work *An Introduction to the Principles of Morals and Legislation* (McCarthy & Chaudhary, 2014). The authors explain that the rational choice theory builds on Beccaria's and Bentham's founding principles and the centrality of self-interest for understanding human behaviour. The main assumptions of the rational choice theory are as follows:

- People have preferences for outcomes (goods, services, money, state of being, etc.) but preferences do not typically relate to actions or behaviours;
- Individual preferences are influenced by the expected benefits of an outcome relative to its cost. There are several benefits (monetary, emotional or social) and costs (incarceration and fines). The anticipated cost-benefit ratio associated with an action is an indicator of its expected effectiveness;

- Individuals can order their preferences for outcomes from most to least valued. Preferences are stable and do not change during decisions but can change if new information is gathered;
- People's assessment of the costs and benefits of outcomes are determined by the information they collect and based on what they perceive. Whilst people prefer to make decisions after having all the information, choices are often made with incomplete information. People have subjective expectations about the outcome they will receive from their choices;
- People's orientation also influences preferences over time. A positive time preference will need more significant future compensation to forgo a current benefit, while those willing to forgo a current benefit for minor compensation in the future will have a negative time preference;
- Preferences are affected by attitudes towards risk and uncertainty. People's attitudes towards taking a risk affect the benefit associated with an outcome. Risk analysis varies from one person to another based on what they perceive to be a cost or benefit;
- Rational choices are those that are consistent with the above assumptions. Rational are those that are consistent with the maximisation of benefits. Rational decisions result in different behaviours among people even if they are faced with the same situation;
- The rational choice theory does not prevent people from acting irrationally. Various factors may influence their decisions. They may have limited cognitive skills or reflect upon previous irrational choices;
- The rational choice theory does not argue that people typically reason, nor does it seem that people make literal calculations. It simply states that inconsistency in people's choices and preferences is probabilistic and that all options can be explained according to their perception.

According to the works of Beccaria and Bentham, people possess free will and are, therefore, empowered to choose their behaviours. The scholars argue that in a conscious effort to maximise pleasure and minimise pain, individual decision-making involves weighing the costs and benefits of their actions or anticipated actions (Gul, 2009). Criminal activity is expected to transpire whenever the perceived benefits of committing the crime outweigh the perceived consequences of committing the criminal act. Similarly, counterfeiters conduct a cost-benefit analysis before manufacturing and selling counterfeit pharmaceutical products.

Counterfeit pharmaceutical products benefit counterfeiters more because of the large income they receive from this illegal trade. The thought of incarceration is outweighed by the financial estimates that they have perceived. Counterfeiters are aware of the consequences but consciously engage in counterfeit pharmaceutical crime because they have worked out the risks as they are perceived in their context.

The rational choice theory presumes that criminal behaviour is not determined by biological, psychological or environmental factors acting on the person which compels him/her to commit a crime (Paternoster *et al*., 2017). The authors continue that the rational choice theory argues that people willfully and voluntarily choose to commit crimes such as counterfeiting pharmaceuticals just as they willfully choose to do other things like go to college, work in a grocery store or consume recreational drugs. The rational choice theory explains criminal acts as the product of choice, meaning that people decide to commit a crime and then follow through on those decisions. The above premise highlights that counterfeiters willingly manufacture counterfeit pharmaceutical products and choose to be a part of the distribution of counterfeit pharmaceuticals. The rational choice theory emphasises that no factors force the individual into counterfeit crime; instead, it is a choice made by the criminal. People view themselves as free-will agents who may do as they wish. Counterfeiters resemble such agents in that they proceed to conduct their illicit trade despite being aware that their product may cause harm. Counterfeiters justify their actions subjectively so that the benefits appear to outweigh the consequences (Paternoster *et al*., 2017). It is also important to note that the costs and benefits that criminals weigh are costs and benefits as they are understood by the person doing the decision-making, and this could possibly be the ring leader of the criminal organisation or the criminal himself (Pratt, 2008). In essence, the costs and benefits are subjective to each person. For example, counterfeiters may assume that they may enter and leave their warehouse because they do not physically see police despite police surveilling their warehouse.

Pratt (2008) explains that the rational choice theory maintains that criminal offenders are no different from non-offenders until their final decision to commit their crime is made. Both willingly choose their behaviours, and both choose those behaviours based on rational consideration of the pros and cons of the intended action and on which action has the best outcome and is in their best interest.

This theory explains the offender as a rational and self-interested individual who chooses to commit counterfeit pharmaceutical crime based on his assessment that it will be more profitable

and rewarding than noncriminal methods to achieve the desired benefit. Similarly, counterfeiters rationalise that selling counterfeit pharmaceuticals will provide a more significant income and sense of reputation than a regular job would.

Clarke and Cornish (1987) state that criminals invariably act in terms of a limited or bounded form of rationality. The authors explain that this means that criminals will not always obtain all the facts needed to make a sound decision, and the information available will not necessarily be weighed carefully as it is incomplete. In some instances, the individual will decide hastily, and without having all the necessary or crucial information they need to decide. In light of this, criminals may trade counterfeit pharmaceutical products without comprehending what product they are selling, what it is supposedly treating and the effects of the product. They may even be unaware of how the pharmaceuticals are being made and the composition of the medicines used but proceed with choosing to sell them to people who are innocently looking to treat an ailment as they know that they will be rewarded after selling the products (Clarke & Cornish, 1987). For criminals, the profits of selling counterfeit pharmaceuticals are the cost of any consequences that people may face after ingesting the medicines.

According to Akers (2017), the rational choice theory does not rely on the premise of past improvement in society, treatment regimens for offenders or early interventions in children's socialisation to reduce current criminality, or on the sheer aversive intensity of sanctions anticipated at some remote time in the future to deter or incapacitate present offending. The rational choice theory does not aim to change the criminal's motives to commit the crime. It takes these as given and proceeds from an analysis of the circumstances engendering particular crimes. It also introduces specific changes to influence the criminal's decisions or ability to commit a crime at a given time or place (Akers, 2017).

According to Akers (2017), rational choice theory simply refers to rational actions performed by reasonably ordinary people in response to a particular opportunity. Counterfeiters similarly operate their illicit trade. Political, environmental, or socialisation factors do not deter them; instead, they are motivated to sell counterfeit pharmaceuticals due to their greater benefit to criminals. More thought and motivation are given to selling counterfeit medicines than being concerned about the consequences (harm to customers, incarceration, fines). Counterfeiters act on situational factors that they know will add benefit to their illegal trade. It is not a single thought that motivates the criminal but a series of ideas that lead to the final decision to offend (Akers, 2017).

The rational choice theory assumes that people commit crimes not purely because of motivation alone but because criminal acts in their present circumstances appear to be a rational option based on their perspective, knowledge base and cognitive processes (Cornish & Clarke, 2017). The authors state that potential offenders calculate the legitimate opportunities of earning an available income, the quantity of the reward that the opportunity offers, the amount provided by illegal methods, and the probability of likely punishment and then they choose the activity- legal or illegal- that offers them the best return. Counterfeiters can be understood similarly. They rationalise the potential reward that counterfeiting brings them and consider the risk should they be apprehended. After this thought process, they consciously decide whether to engage in committing a counterfeit crime or not.

Gilmour (2016) states that criminal acts, according to the rational choice theory, may also occur due to demand. For example, masks and sanitiser were in great demand during the pandemic, and counterfeiters used people's fear of infection to sell counterfeit masks and sanitiser that did not contain the correct amount of alcohol despite its label (Interpol, 2022). Pharmaceutical products relating to the treatment and prevention of COVID-19 circulated in markets globally, and criminals rationalised their actions by believing that they were suppliers of products in demand and were helping society, all while earning a substantive income. Perhaps the most significant effect of their decisions is the pleasure and satisfaction the criminal gets from committing counterfeit crimes, knowing they achieve a larger income than the effort to make that income from a regular job (Thomas *et al.,* 2022). Counterfeiters consider the illegal pharmaceutical trade as a more straightforward crime to commit since they are not directly causing bodily harm (like murderers or rapists) but are making a product accessible to people who may not be able to obtain them through a hospital or pharmacy. Their consolation is their presumption that they are helping others heal from sickness, and in return, they feel justified in their decision to engage in counterfeit pharmaceutical crime. The rational choice theory is based on the premise that criminals are rational, logical decision makers who conduct a cost-benefit ratio of their actions before acting them out (Thomas *et al.,* 2022).

The rational choice theory proves worth explaining counterfeit pharmaceutical crime in that it highlights that individuals who commit crimes are cogent, reasonable thinkers who justify themselves before committing a crime. This particular theory was chosen for this study because it states that biological, psychological and environmental factors surrounding an individual do not determine criminal behaviour. Instead, it suggests that criminal behaviour is chosen behaviour and that the person committing the crime is aware of their actions and has already

rationalised this behaviour to be illegal. Furthermore, the individual committing the crime has prior knowledge that their actions are unjust and that they are likely to face punishment should they be found guilty of criminal acts (Pratt, 2008). This theory strongly states that criminal behaviour results from an individual's willful and voluntary behaviour. This allows for counterfeit crimes to be explained using this theory.

The individual involved in selling counterfeit pharmaceutical products has already calculated the costs and benefits associated with selling counterfeit pharmaceutical products. The rational choice theory explains that this calculated decision is made on the criminals own accord. The risks of being caught is far less concerning to the counterfeiter than the money made from selling the counterfeit pharmaceutical products. The decision to participate in counterfeit pharmaceutical products being sold is intentional and has been given much thought. The rational choice theory is suitable for this study because it highlights that the individual is solely responsible for their involvement in selling counterfeit pharmaceutical products and that biological, psychological and environmental factors are not contributing factors.

3.3.1.1. Limitations of the rational choice theory in relation to counterfeit pharmaceutical crime

The rational choice theory focuses greatly on individual choice, willfulness and rationalisation. In explaining the phenomenon of counterfeit pharmaceutical crime in South Africa, this theory does present some limitations. The rational choice theory does not contextualise factors such as poverty and unemployment into its premise. In South Africa, unemployment and poverty are rife, and many are desperate to find a way to earn an income for their families. While the theory covers the rationality of the decision, it does not factor in psychological factors such as desperation, which is often the reason behind criminal acts in developing countries such as South Africa.

There may often be instances where some criminals do not even consider a cost-to-benefit ratio; their only concern is being able to take home money so that their families are taken care of. Furthermore, the rational choice theory does not consider cultural barriers in counterfeit pharmaceutical crime. In rural parts of the African continent and South Africa, certain forms of medication are regarded as taboo. For example, the ingestion of Viagra in a community that bases manhood as its foundation, being found with such medicine may cause isolation, criticism and harsh judgment. In addition, birth control pills may cause great conflict amongst traditional married couples regarding the expansion of their family. However, such medication

may need to be used in secret by some men to maintain their manhood and reputation in the community, or women may need birth control pills should they feel that they do not want to expand their family further. Access to medication in communities such as these assists in maintaining the balance of the cultural aspects within the African continent. In this instance, selling counterfeit pharmaceuticals is not only a result of personal choice or monetary gain but also a way of maintaining social and cultural balance.

3.3.2. The General Strain Theory

In the 1980s, Robert Agnew proposed the General Strain Theory (GST). Agnew proposed a theory that covers a broad range of behaviours by not concentrating on the lower class but providing a model more applicable to all individuals' frustrations in everyday life regardless of their social class (Agnew & Brezina, 2019). Unlike Merton's Strain Theory, the general strain theory does not rely on assumptions about the frustration arising when people realize that the American Dream is a false promise to those of the lower class. Instead, this theoretical framework assumes that people of all social classes and economic positions deal with frustrations associated with their daily routines. The general strain theory includes all individuals' frustrations, not only those from lower social classes.

Previous strain theories, such as the models proposed by Merton, Cohen and Cloward, and Ohlin, focused on an individual's failure to achieve positively valued goals that they had been socialised to work to obtain in accordance with what society perceived to be a goal worth achieving to heighten their social quo or to provide a particular status in society (Agnew, 2017). The general strain theory also focuses on this as a source of strain but identifies two other categories of strain: the presentation of noxious stimuli and the removal of positively valued stimuli.

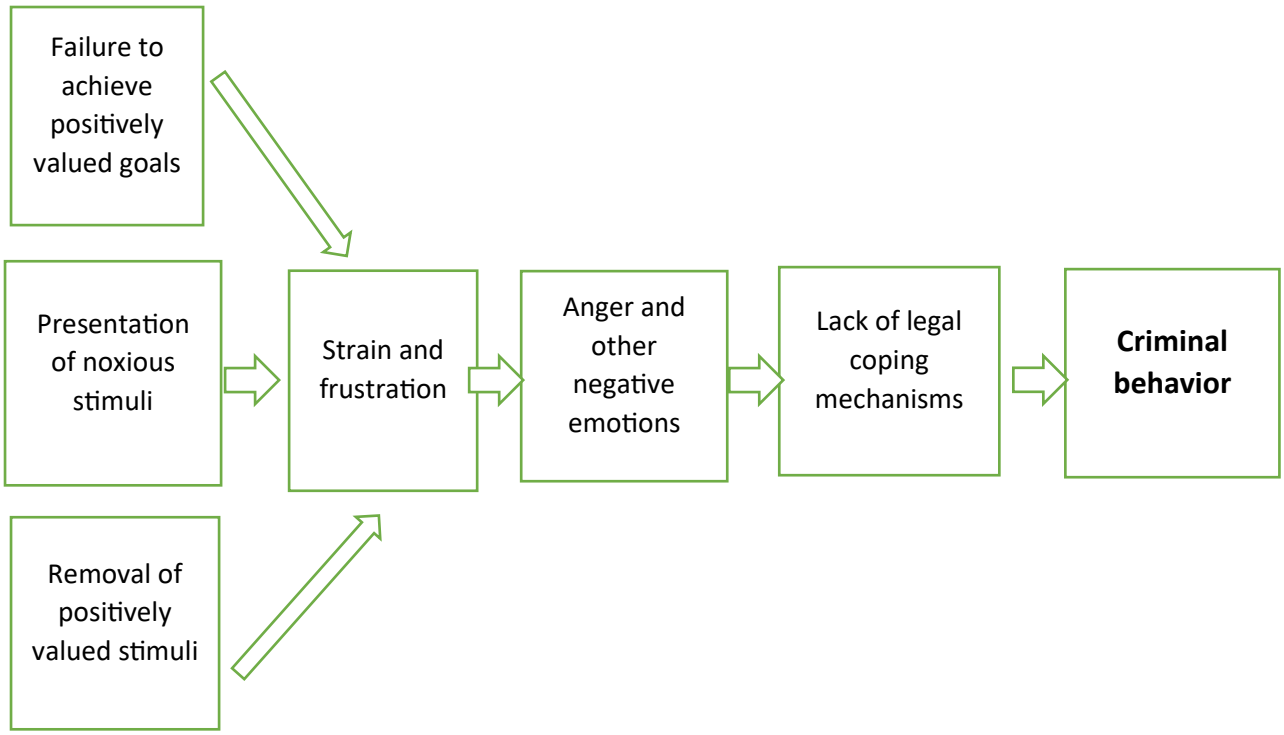
Agnew (2017) explains that in addition to failing to achieve one's goals, Agnew claimed that noxious stimuli (i.e. bad things) in one's life could cause significant stress and frustration. Examples of noxious stimuli would include things like an abusive partner, critical teachers/lecturers or an overly worked and underpaid job. These are just a few of the negative factors that can exist in one's life, and the examples are plentiful if poverty and unemployment are considered in the argument. Unemployment, the lack of financial support, reliance on your partner and the inability to live a simple lifestyle with basic needs are some of the many strains that South Africans experience. Counterfeiters wish to escape the noxious stimuli present in their lives, and selling counterfeit pharmaceuticals is an easier and quicker way out financially.

The chances of finding a good job or escaping an abusive partner prove to be more stressful to individuals than the criminal act that they consider committing as a means to assist them in negating the noxious stimuli in their lives.

The other strain category that Agnew identified was the removal of positive stimuli, which is likely the largest source of frustration (Agnew, 2017). Examples of this strain include the loss of a good job, the loss of your car for a period of time or the loss of a loved one. Such losses, like the other two sources of strain, may have varying degrees of influence and frustration, depending on the individual experiencing the loss. One person may not feel much frustration over losing a job or divorcing a spouse, while another person may experience severe anxiety or depression from such events. In relation to counterfeiters, the loss of a stable lifestyle or a well-paying job can lead to significant frustration and financial strain. Counterfeit pharmaceuticals reel in abundant profits with little work and effort, and the prospect of attaining what was lost proves tempting for criminals.

According to Agnew (2015), criminal behaviour and criminal acts, such as counterfeit pharmaceutical crime, occur when people search for ways to cope with their adverse emotions that emerge through unfavourable situations they do not have control over. In South Africa, it is not uncommon for people to have many negative feelings regarding their lives. Amid health issues, unemployment, poverty, lack of opportunities and the inevitable feelings of failing one's family, people are filled with some emotion that either makes them want to act out or internalise how they are feeling. For those who act out to cope with their feelings about their life situation, counterfeit pharmaceutical crime provides a way to release emotions of anger and frustration about a situation that may be unfavourable to them. Nowadays, everyone has some aspect of their life that brings them negative feelings when they think about it.

For example, an individual who finally succeeds in getting their college degree cannot find any employment in their field. The push factor towards committing counterfeit pharmaceutical crime results from how intensely the individual experiences negative emotions. Some people can motivate and encourage themselves through unfavourable circumstances through the assistance of their friends and family. At the same time, those without any support may feel like committing a criminal act that is not perceived as dangerous and hurtful, which could provide them the release they need.



Source: Agnew & Brezina (2019)

Illustration 9: Model of the general strain theory

The illustrated model above provides a visual depiction of the general strain theory. The illustration shows the three categories of strain that lead to an individual committing a crime to negate the strain they are feeling.

Ultimately, the general strain theory proposes that these three categories of strain (failure to achieve goals, noxious stimuli and the removal of positive stimuli) will lead to stress and anxiety, and this results in a propensity to feel frustration and anger (Leeper Piquero & Sealock, 2010). Anger can be seen as a primary mediating factor for criminal activity in the causal model of the general strain theory. According to the predictions of Merton and Agnew, an individual will be predisposed to commit crime and deviance from the extent of the anger caused by the source of strain they experience.

According to Leeper Piquero and Sealock (2010), in response to empirical tests of the general strain theory and attempts to refine the perspective, Agnew provided expanded discussions on the role of various types of strain contributing to criminal behaviour. First, he distinguished between objective strains as *events or conditions that most members of a given group dislike* and subjective strains as *events or conditions that are disliked by the people who are experiencing (or have experienced) them*. Acknowledging that not all people respond to the same condition in the same manner, Agnew emphasises the need to account for the individual's subjective assessment of strain to understand its role in offending. Agnew's ideology was to

ascertain how strain is perceived differently as not every individual experiencing strain will resort to criminal behavior. Agnew seeks to determine differing intensities of strain released or soothed through committing a crime.

The authors continue to explain that a second component of Agnew's elaboration of the general strain theory consists of delineating four characteristics of strain related to crime: (1) when strain is seen as unjust, it is more likely to cause anger and frustration (2) when strain is high in magnitude or severity, it is more likely to result in a criminal response (3) strains associated with low social control (unemployment and homelessness) are more likely to lead to crime and (4) strain is associated with a criminal outcome when criminal activity is seen as a means to reduce strain (someone desperate for money will be tempted by the income earned from the counterfeit trade hence the crime of counterfeiting reduces the strain of not having money).

A third point in Agnew's elaboration of the general strain theory is that while some strain will result in criminal activity, not all strain is expected to produce a criminal response (Leeper Piquero & Sealock, 2010). For instance, child abuse, homelessness, unemployment and the failure to achieve core goals that are not the result of conventional socialisation and that are easily achieved through crime are likely to increase the likelihood of criminal activity. On the other hand, unpopularity, isolation and long working hours are strains that would not typically increase the likelihood of crime. The failure to achieve goals includes blocked opportunity due to a person's location in the class structure, but it can also involve the failure to realise desired goals due to individual weakness and inadequacies (for example, not being able to enter a university if one does not meet the criteria). Agnew further postulates that criminal behaviour can result from experiencing stressful life events- both the removal of positive stimuli and the exposure to noxious stimuli (Agnew, 2015). For example, being rejected for a desired course in university and exposing one's self to counterfeit crime as a means to create a social status to negate the social impact of the rejection received.

In Merton's strain theory, he developed five methods that people may use to react to the strain that they are experiencing, but he was unable to explain why some people are able to choose to adapt in that particular way or why only specific individuals engaged in crime (Agnew, 2015). Merton's five adaptations to strain are conforming, innovating, retreating, ritualising and retreating. Conforming refers to those individuals who aim to obtain the societal norm of success and financial prosperity through legitimate ways. An innovator relates to those who aim to achieve the social norm of success but use alternative methods that may not always be

legal to attain their goals. A retreatist refers to those who reject social norms and the means to achieve those norms. A ritualist holds onto the means to achieve societal norms but rejects the actual goal (for example, someone willing to work a minimum-paying job and never reach financial wealth). Lastly, a rebel refers to those who reject societal norms and the means to attain those goals and replace them with goals and means of something else (Agnew, 2015).

Agnew kept Merton's five modes of adaptation but explained why an individual chooses one way of adapting over another and why only certain people commit crimes. Agnew expressed that people differ in how they adapt to strain due to the variations in their coping mechanisms (Agnew, 2017). Agnew suggested three types of coping mechanisms: cognitive, behavioural, and emotional (Agnew & Brezina, 2019). Cognitive coping occurs when a person tries to minimise or deny their negative feelings with affirmations such as *it was not meant to be* or *it's okay, I'll try next time*. Behavioural coping occurs when a person takes permanent measures to solve the perceived cause of the negative feelings. It could result in criminal behaviour when people choose illegitimate ways to negate their negative emotions. For instance, in an unhappy relationship, instead of breaking up with the person, one may murder them. Lastly, emotional coping occurs when people do not deny their feelings but choose to reduce their negative emotions. For example, a person may hike or go out with friends. According to Agnew and Brezina (2019), emotional coping can also result in criminal behaviour if the person chooses to engage in counterfeit pharmaceutical crime to reduce their negative emotions.

Whilst the primary motivation to engage in selling counterfeit pharmaceutical products would be a large amount of money made with little time and effort on behalf of the individual involved in the crime, there are other reasons why this crime occurs, and the general strain theory considers these reasons thus making it suitable for this study.

One of the reasons that the researcher has chosen to use the general strain theory is because it identifies and highlights strain on both ends of the criminal act. The individual selling the counterfeit pharmaceutical products experiences the strain of poverty or lack of employment, whilst the individual buying the counterfeit pharmaceutical product experiences the strain of being unable to attain the medication or product elsewhere or to afford the medication at a legal clinic or pharmacy. The general strain theory not only covers the financial strain of the individual but also explains that factors such as social involvement, peer pressure, lack of employment and the lack of equal opportunities are real and existing strains in many South

African communities, leading individuals into an illegal but lucrative routine of selling counterfeit medication (Fontaine, 2019).

The general strain theory is worthy of explaining counterfeit pharmaceutical crime because it highlights that several occurrences can result in crime. The strain experienced differs from person to person, and the general strain theory gives us a perspective to understand that ideology. Counterfeit pharmaceutical products provide an easy solution to a tough situation in a country where necessities are hard to come by. The researcher believes that the strain theory is appropriate for this study because it examines a crime by reviewing the person behind it, their reasons for engaging in it, and the actual crime. According to Kabiri *et al.* (2023), the general strain theory considers the thoughts, attitudes, behaviours and circumstantial push factors that make a person feel like they have no option but to resort to an illegal measure to escape their current strains. The general strain theory does not only look at counterfeiting from a low social class or as if counterfeiting is only committed by poor people in poor communities. This theory allows scholars to understand that anyone can commit a crime in any environment regardless of where people rank in the social hierarchy.

3.3.2.1. Limitations of the general strain theory in relation to counterfeit pharmaceutical crime

The general strain theory by Robert Agnew demonstrates an improvement to Merton's strain theory but exhibits some limitations. While this theory does allow counterfeit pharmaceutical crime to be explained, it is rather broad and leaves room for almost any life event or situation to be perceived as a strain. In a developing world like South Africa, strain is present almost everywhere and in everyone's life.

A theory that is this vast is challenging as it creates the possibility of too many variables that would consistently yield support, making the theory unable to be proven false (Agnew & Brezina, 2019). While the general strain theory elaborately covers the aspect of social strains, it does not include cultural strains that exist in South Africa by all racial groups in relation to their traditional values and goals. For example, the strain of a failing marriage in a culture that does not condone divorce or the strain of not being able to prove one's manhood as a result of not being able to have a baby. Cultural strains can cause people to engage in counterfeit pharmaceutical crime, but the general strain theory does not focus directly on this issue. Instead, it incorporates strain from all aspects of society and places great focus on what Western society presumes to be *the life* (Agnew, 2017).

The general strain theory also focuses on the relationship between an individual and their immediate social relationships. It does not focus on neighbourhoods, schools or larger communities that experience incidences that cause strain (Kabiri *et al.*, 2023). The theory does not cater to the incidence that counterfeit pharmaceutical crime may occur in a group setting should multiple strained community members wish to commit this crime, such as members from the same community selling counterfeit pharmaceuticals at various points in the area. To illustrate, during the COVID-19 lockdown, people were not allowed to leave their homes; the most they could do was associate with those in the same community. This small-scale socialisation in communities and areas across the globe created a means for counterfeiters to disperse their counterfeit pharmaceutical products since they were aware that people were searching for medication to treat the virus should they contract it. The country was on lockdown, but counterfeiters had runners meeting people around them in residential areas and could still sell their counterfeit items to their community (Fontaine, 2019). Those looking to make money during the lockdown due to financial strain were able to engage in counterfeit pharmaceutical crime by assisting in selling the counterfeit products at a different point within the community.

Additionally, communities with high crime rates, poverty and unemployment can cause high strain and frustration levels to those residing in that community. Communities that are saturated with such adverse factors accommodate individuals who experience intense feelings of anger and strain and may resort to criminal behaviour to release those feelings. For example, Soweto in the Gauteng Province of South Africa is a high-crime area filled with adverse factors such as poverty, unemployment and family disruption.

To escape the feelings attached to living in such an environment, people may resort to counterfeit pharmaceutical crime to release themselves of the strain they experience as a result of living in that community.

Lastly, the general strain theory does not differentiate between the strain felt by men and women. In South Africa, certain cultures do not permit women to express their feelings about events that may cause them strain. For example, a woman experiencing verbal abuse may experience strain, anger and frustration but are forced to internalise their feelings and continue with life as usual. On the other hand, if men experience strain in their lives, they release their feelings of frustration through crime, bad habits or violence, and society perceives it as normal.

It is more socially acceptable for men to commit crimes to release their negative emotions than it is for a woman.

The general strain theory does not cater to cultural differences between men and women in South Africa; it simply looks at crime as a result of strain. Women experience strain in several ways, but feelings of guilt or shame often riddle them. This does not negate the fact that they may engage in counterfeit pharmaceutical crime, despite being a woman, to release their negative feelings through the presumption and consolation that counterfeit pharmaceuticals are not a direct harmful act to the person purchasing the item. The general strain theory is limited in that it does not acknowledge that women experience and cope with strain differently than men; hence, their reactions to releasing their strain are different than those of men.

3.4. Conclusion

In this chapter, the researcher discussed the theories underpinning the study. The researcher commenced this chapter by discussing the necessity for an Afrocentric approach to research in Africa/South Africa. The researcher explained that Western theoretical approaches do not fully capture the phenomena that occur in diverse parts of the world. This chapter looked at the rational choice theory and the general strain theory to explain the occurrence of counterfeit pharmaceutical products in South Africa. The rational choice theory explains that counterfeiters are rational, logical beings with free will. This theory is worthy of defining the research phenomenon as it highlights that criminal behaviour occurs as a choice after weighing the costs and benefits associated with counterfeiting. The researcher also employed the general strain theory to elaborate on the complexity of stressors in daily life that lead people to commit counterfeit crimes. The general strain theory was fit for this study because it explained counterfeit crime to be committed by any individual and not just the lower class. In the following chapter, the researcher will discuss the research methods utilised in the study.

CHAPTER 4: RESEARCH METHODS

4.1. Introduction

This chapter describes the research design, methodological procedures and techniques used to conduct the current study. This chapter will also offer an exposition of the processes used in collecting data from the research participants. Furthermore, it highlights the techniques that the researcher has employed to analyse the data. The discussion below relates to the research design that the researcher has utilised for this study.

4.2. Research design

Bayens and Roberson (2011) explain that a study's research design refers to planning and carrying out a study after the research question or problem has been conceptualised. The author further states that the research design is the strategic plan guiding the remainder of the research study. Within this plan, the researcher decides the purpose of the research, the method of investigation, and the measuring principle to be employed (Bayens & Roberson, 2011). According to Hakim (2012, 167), the research design "deals primarily with aims, purposes, intentions and plans within the practical constraints of location, time and money". This statement illustrates the researcher's ability and freedom to interject their ideas while maintaining sensitivity to design issues in conducting a successful study.

The researcher conducted this study using the exploratory research design to gather greater insight and understanding into counterfeit pharmaceutical crime in South Africa. This research design is suitable for a study such as this, where the sample is relatively small. According to the work of Du Toit and Mouton (2013), an exploratory research design uncovers factual discoveries relating to the research topic or confirms the occurrence of existing phenomena. An exploratory research design was appropriate for this study due to the limited literature available on the research topic in South Africa. The researcher used this research design to obtain reliable and credible participant data through one-on-one interviews and observation. The researcher used the exploratory research design to acquire new knowledge through interacting with operational members, such as the SAPS, that police counterfeit crime in South Africa.

4.3. Exploratory research design

According to Mouton and Marais (1996), there are three commonly used study types in criminological studies: exploratory, descriptive, and explanatory research, depending on

whether the aim of the study is to explore, describe, or explain. The researcher selected the exploratory research approach for this study as the study's primary aim is to explore the research phenomena (i.e. counterfeit pharmaceutical products). Bryman (2004) explains that exploratory research is conducted to determine the nature of the problem and is not intended to provide conclusive evidence but helps to better understand the research problem. By utilising the exploratory research design, the researcher wishes to gain greater insight into counterfeit crime in South Africa, focusing on counterfeit pharmaceutical products.

According to Saunders *et al*. (2007), exploratory research is conducted when there is limited knowledge of a particular phenomenon and a problem has not been clearly defined. This type of research does not aim to define definite or conclusive answers to the research questions but seeks to explore the research topic on various levels of depth. Brown (2006) suggests that exploratory research addresses problems whereby little to no research has been conducted. Singh (2007) adds to Brown (2006) by stating that exploratory research, even on extreme topics, creates a foundation for more extensive and conclusive research. It guides the initial research design, sampling, and data collection method (Singh, 2007).

Bickman and Rog (2009) state that exploratory research is often conducted on emerging issues. Although counterfeit crime is not an entirely new social and criminal issue, counterfeit pharmaceutical crime is a recent and prevalent issue which was further highlighted and exacerbated by the COVID-19 pandemic. Therefore, the study's exploratory nature permits the researcher to determine solutions to the problem whilst bridging the gap in what has already been studied and learned on this topic thus far. It also permits the researcher to gain insight into the aims for this study by acquiring more significant insight into the study objectives (Bickerman & Rog, 2009). The exploratory research designs assist the researcher in comprehending the phenomenon more thoroughly before responding to any presumptions on the issue. This study design is an appropriate attempt to discover new knowledge about counterfeit pharmaceutical crime in South Africa (Adu, 2019).

The researcher has selected the exploratory research design to explore and acquire a greater perception of counterfeit pharmaceutical crime in South Africa from a criminological perspective. This selection aims to identify new knowledge, insight, understanding and meanings relating to the research topic. The results from this study may not necessarily be generalisable to a larger population, but they will provide a better understanding of the sample being examined, as well as their experiences and daily challenges in the policing field.

4.4. Research method used for the purpose of this study

A qualitative research method was selected for this study to examine the extent of counterfeit pharmaceutical products in South Africa. Consequently, a greater explication of the adopted methodology is necessary. Crix (2004) states that qualitative research methodology involves "an in-depth investigation of knowledge", thus allowing the researcher to concentrate on examining counterfeit pharmaceutical products by imploring the participant's attitudes, perceptions and opinions regarding the research topic. According to Bryman (2004), qualitative research emphasises words rather than quantification in the collection and analysis of data. The use of the qualitative method aids in the extensive understanding of specific issues surrounding counterfeit pharmaceutical products, which may not be obtained through the quantitative research methodology. Certain specific and subjective factors such as opinions, beliefs, views, moods, perceptions and emotions are complex to some extent and require a great deal of rapport on the researcher's behalf and subsequently become difficult to capture quantitatively (Baumgartner & Strong, 1998).

Rahi (2017) states that qualitative research aims to understand a given research problem from the perspectives of the local population that it involves. For this study, the researcher selected the qualitative research methodology to observe and gather data from officers within the South African Police Service (SAPS) who single-handedly deal with the research phenomenon daily. Additionally, qualitative research is especially effective in obtaining specific information about particular populations' opinions, behaviours and social contexts. In this instance, the researcher utilised the qualitative research method to identify, observe and understand the research phenomenon by serving as the study's human instrument. Data was mediated through the researcher instead of inventories, machines, electronics or questionnaires. Moreover, qualitative research requires fieldwork. The researcher physically visited the various police offices to observe and record behaviours in their natural environment. This allowed for efficient and effortless rapport between the participant and the researcher. Lastly, the qualitative research process is greatly inductive as it permits the researcher to construct abstractions, concepts, hypotheses and theories from details provided during fieldwork (Mack *et al.*, 2005).

Qualitative research is an approach that permits the in-depth examination of people's experiences through the use of a specific set of research methods, such as in-depth interviews, focus group discussions, observation, content analysis or visual methods. Perhaps one of the most distinctive features of qualitative research is that this approach allows the researcher to

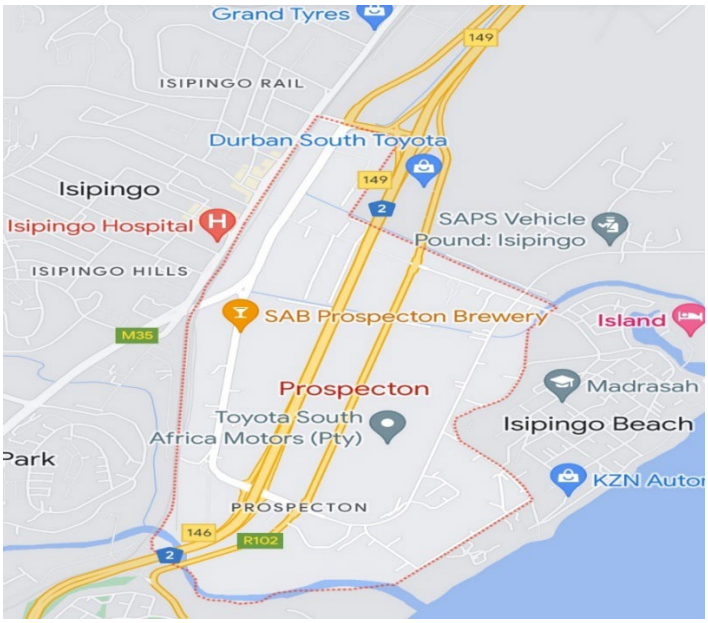
identify issues from the perspectives of the study participants and understand the interpretations and meanings that they give to behaviour, events or objects. For this study, the researcher employed in-depth interviews with officers from the SAPS to capture their opinions, perspectives, experiences and understanding of the research topic from their stance. This permitted the researcher to methodologically gather insightful knowledge to understand counterfeit pharmaceutical crime in South Africa better (Schober & Vetter, 2020).

4.5. Spatial delimitation of the study

The study was conducted in two locations in Durban, Prospecton and Durban Central. Durban falls within South Africa's second-largest province, Kwa-Zulu Natal. Durban was founded in 1835 and was named after Sir Benjamin D'Urban. In the 1840s, the Boers grappled with the British over control of Durban. It became a town in 1854 and was created into a city in 1935.

4.5.1. Prospecton

Prospecton is an industrial area south of Durban in the eThekwini municipality of Kwa-Zulu Natal. Prospecton holds the Durban South Commercial Crime Office, which employs members with knowledge, experience, and expertise in the research topic. This location provided fourteen officers with varying years of experience and from different ranks who voluntarily participated in this study.



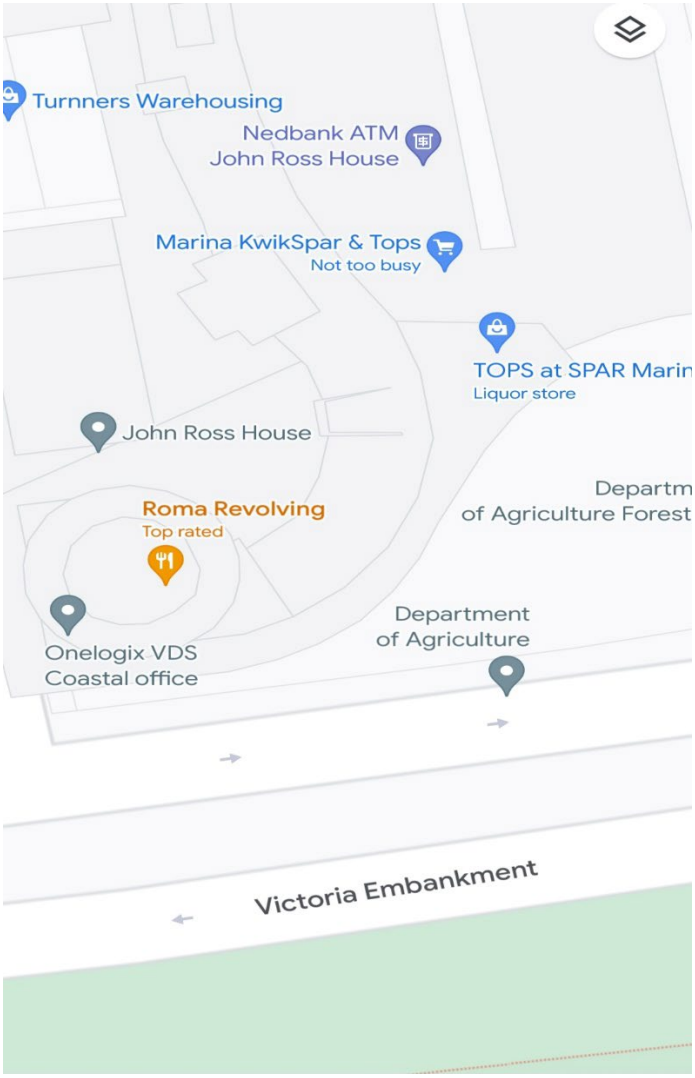
Source: (Google Maps, 2023)

Illustration 10: Map of Prospecton, South of Durban

Illustration 10 above displays the map of prospection and indicates the study location of part of the study sample. Officers from the Commercial Crime branch of SAPS were located in the area listed above.

4.5.2. Durban Central

The John Ross House on the Victoria embankment in Durban Central is home to the Directorate for Priority Crime Investigations (DPCI), commonly called the *Hawks*. Officers in this building were chosen to participate in this study as they are supposedly regularly exposed to and trained in counterfeit crime. The researcher acknowledged that members from this unit would prove vital to this study. This study location provided eleven officers to participate in the study.



Source: (Google Maps, 2023)

Illustration 11: Map of Durban Central

Illustration 11 above displays the map of Durban Central, where the second portion of the study sample was selected.

The researcher has broadly referred to each of the study locations to uphold the relevant ethical considerations and maintain the anonymity of the locations of the offices visited for the sake of the study. The researcher refrained from listing the study's precise road names and locations as this is a sensitive and high-profile topic involving high-ranking officers; hence, the necessary ethical protocols had to be adhered to to protect the study participants.

4.6. Study population

Qualitative research generally includes a smaller sample than a quantitative study (Nassaji, 2020). This promotes the collection of rich insight and knowledge from those with direct experience, ideas, perceptions and beliefs on the research phenomenon. The study population comprised officers of varying ranks from the Commercial Crime Branch and the DPCI (Hawks) in Durban who are from different socio-economic backgrounds, racial groups, and genders and have varying years of experience within the SAPS. This unbiased sample variance allowed the researcher to obtain authentic information that was subjective to that particular individual rather than a preconceived idea of what the sample as a whole may have to share. Upon identifying the relevant officers at both locations, data was collected whilst adhering to all the ethical considerations set out for the study. Interviews were conducted with semi-structured questions to understand the research topic and allow the participant to share their experiences and thoughts on the topic securely. The said interviews and interview questions were devised to gather rich data and insight from those participants most experienced in counterfeiting. In totality, twenty-five (25) participants were chosen for this study.

4.7. Sampling and sampling methods

In any research study, the best strategy is to investigate the phenomenon within the population, but it is not practically possible to study an entire population (Archarya *et al.*, 2013). Subsequently, we study a *sample* representative of the population. By employing a representative sample, the researcher can reduce the research costs incurred, the time taken to conduct the research and limit the manpower required to conduct the study. The researcher did not collect data from the entire police population but only from those selected and voluntarily agreed to participate in the study. The results obtained from this study are not representative of

all police officers, nor do they aim to generalise about the larger population, as the sample size selected for this study does not allow for generalisation.

This study's total sample size was twenty-five (25) participants. Elaborately, the research sample comprised fourteen (14) police officers from the Commercial Crime Branch in Prospecton and eleven (11) police officers from the Hawks, all based in Durban.

The 25 police officers had to meet the following conditions: be part of a unit or branch of SAPS that deals with the research phenomenon (counterfeit crime), have at least five years' experience working in such a unit and be from any socio-economic, gender or racial group. These participants were chosen in accordance with their experience and knowledge in the context of the research topic. The researcher did not select participants based on their gender but did try to maintain gender neutrality in the sample. However, the majority of participants in the sample were male.

According to Etikan and Bala (2017), the researcher may employ two broad sampling techniques: probability and non-probability. Probability sampling refers to the sampling method whereby members of a population have a pre-specified and equal chance to be selected as part of the sample. Examples of probability sampling include cluster sampling and stratified sampling. Non-probability sampling, on the other hand, relies on the subjective judgment of the researcher and means that not all members of the population have an equal chance of being selected to participate in the study. Examples of non-probability sampling include convenience /purposive sampling and snowball sampling.

For this study, the researcher made use of non-probability sampling. To select the participants, the researcher employed purposive and snowball sampling. Etikan and Bala (2017) state that purposive sampling is based on the researcher's judgement as to who will supply the best information to progress and achieve the study's objectives. Alvi (2016) states that purposive sampling requires researchers to have a thorough knowledge of their research aims and objectives to rely on their judgment when choosing participants to participate in their study. The author continues that purposive sampling is used by researchers when they wish to access a particular subset of people as their sample because they fit a specific profile created to achieve the study aims (Alvi, 2016). Purposive sampling entailed hand-picking participants from the target population (the SAPS). The researcher chose this sampling technique because it allowed the most relevant participants, who are most experienced and knowledgeable about the topic under study, to be selected.

The second sampling technique that the researcher used was snowball sampling. This sampling method involves primary data sources nominating another potential primary source (Parker *et al.,* 2019). Snowball sampling is based on referrals from initial participants to generate additional participants. This process is also referred to as *chain referrals*. There are three types of snowball sampling: linear snowball sampling, exponential non-discriminative snowball sampling and exponential discriminative snowball sampling. The researcher used linear snowball sampling whereby one participant will provide one new referral who will then be selected as part of the sample. This referral will then provide a new referral, and this pattern continues until the sample size is achieved (Bhat, 2022). The researcher chose this sampling technique because the referral of one participant to another allowed the researcher to filter out members from the SAPS who were most suitable to participate in the study. This technique also permitted the researcher to recruit participants with experience, which would have otherwise been difficult and time-consuming. The above sampling techniques were well suited to this study as they allowed the researcher to collect the appropriate and relevant data needed for the study and to illuminate the researcher's comprehension of counterfeit pharmaceutical crime from various points of view.

4.8. Data collection

Merriam (2002) postulates that there are three significant sources of data in a qualitative study-interviews, observations and documents. The author further explains that the data collection method used is determined by the study's research question and by ascertaining which source of data will generate the most appropriate information with which the research aims can be achieved. For this study, the data collection technique used was one-on-one semi-structured interviews with each participant. The researcher chose semi-structured interviews because this method allowed the researcher to explore the opinions and perceptions of police officers on counterfeit pharmaceutical products. With this method, the researcher could explore why the participant had given a particular response by further probing for more information.

According to Maxfield and Babbie (2017), qualitative interviews can be the sole way of gathering data in criminal justice studies. The authors continue by saying that qualitative interviews involve hearing the richness of human experience, sifting through layered meanings in context and recognising shared cultural meanings. Dantzker *et al.* (2018) define an interview as an interaction between two individuals where one of the individual's goals is to obtain a specific response to a particular question. Burns (2000) elaborately states that it is a verbal

face-to-face exchange whereby the interviewer seeks to obtain information from the participant.

Cohen *et al.* (2000) explain further that it is a two-person conversation that the interviewer initiates to elicit relevant knowledge to aid in fulfilling the study's objectives. Interviews are essential for producing thick descriptions that help lead to fundamental understanding. Interviews don't only involve describing actions but also understanding the meaning of behaviours in context.

For this study, the researcher employed semi-structured interviews to collect data from police officers working with counterfeit crime to study the meaning of their experience of working with counterfeit pharmaceutical products. Semi-structured interviews allowed the researcher to have face-to-face contact with each participant, allowing consistency and thoroughness in the data collection. Semi-structured interviews allowed the researcher to build rapport with each participant, allowing the researcher to easily clarify confusion or misunderstandings during the interview, thereby increasing the likelihood of valuable and accurate responses.

Semi-structured interviews were selected for this study because they provide greater knowledge from the participants about counterfeit pharmaceutical products. They permit the participant to answer freely and in a manner that they wish to as there are no correct or incorrect answers, and neither are the questions structured or one-word answer questions. This way, interviewees can ask for clarification once the researcher has posed the question. The researcher can also probe, follow up, or alter the course of the interview if necessary. This data collection technique was suitable for this study because it allowed the researcher to understand counterfeit pharmaceutical crime from the participant's point of view, as they are the individuals who work closely with matters relating to the research topic. An advantage of this technique is that a substantial amount of information can be obtained, and clarification and follow-up can be completed during the interview if needed.

Bayens and Roberson (2011) state that a semi-structured interview involves developing a set of questions in advance. The researcher developed an interview schedule for this study before arranging interviews with the participants. Maxfield and Babbie (2017) define an interview schedule as the structure of an interview that may have predetermined questions or topical areas to be discussed with the participants. This study's semi-structured interviews were conducted using predetermined questions formulated using the literature review data.

Using a semi-structured interview schedule allowed the researcher to explore the themes that emerged in the interview. This technique permits unscheduled probes or spontaneous questioning relevant to the dialogue. Each one-on-one interview was recorded, and its duration ranged from 11 to 54 minutes. The researcher audio-recorded the interviews as accurately and thoroughly as possible, making notes and observations throughout each interview.

4.9. The interview process with participants

Kraska and Neuman (2012) state that an interview proceeds through stages, beginning with an introduction and entry. The interviewer greets the participant, introduces themselves, shows the participant, and explains that authorisation/research permits and permits the participant to read and sign the necessary documents on ethical considerations. Before this, the researcher must obtain proper written permission to conduct the interview. The researcher must ensure that a suitable and quiet place is accessible to conduct the interview.

Prior to conducting the interviews, the researcher obtained permission from SAPS to conduct research. The Research Component of SAPS assisted the researcher with this documentation and provided contact details for provincial offices to arrange interviews. Upon making telephone contact with the relevant officers, the researcher arranged interviews with each participant at convenient times and locations. The majority of participants in this study preferred to meet in the first half of the working day and in their offices to avoid noise and disturbances. The researcher greeted the participant and introduced herself, thereafter, she explained the purpose of the research and the categories of questions in the interview schedule. The researcher continued by explaining the various ethical considerations and allowing the participant to read, acknowledge, and sign two ethics documents, namely an informed consent and an information sheet and consent to participate. The researcher assured the participants of their right to confidentiality, anonymity, and privacy and not to be harmed physically, psychologically or emotionally throughout the interview. The researcher highlighted that participants may withdraw from the interview if they feel harmed or uncomfortable.

Before the commencement of the interview, the researcher requested a quiet and private room (usually the participant's office) to interview with an audio recorder. This request was to limit any background sounds that would hinder the proper transcription of the interview during the analysis stage of the study.

Participants were encouraged to speak freely and openly about their views and opinions on the research phenomena. When conducting the interviews with the participants, the researcher kept

the interview schedule with her and did not permit the participants to view the questions beforehand. The rationale was allowing the participants to speak freely without predetermining their responses to fit what they may assume the researcher wants to gather from them. During the interview, the researcher probed the participant on relevant topics. The researcher unobtrusively made field notes during the interview, noting personal reflections, a physical description of the setting, and the participants' body language. Jupp (1989) states that field notes are the researcher's detailed description of what has been observed within the interview. The researcher carried a notebook to each interview to record notes in that particular setting. In this study, the researcher conducted all the interviews personally and took responsibility for recording field notes and making observations. The researcher diligently took notes during the interviews to help recall what occurred so that a more detailed document could be produced later (Bayens & Roberson, 2011). After the interview, the researcher reminded the participants that their confidentiality and anonymity would be maintained and to feel free to contact the researcher regarding the interview and any information shared therein. The findings of the study are presented as verbatim quotations from the participants. The study does not identify the participants by name to ensure that the stipulated ethical considerations discussed in the previous chapter are upheld. For the convenience of the study, participants will be identified as *Participant 1….Participant 2* and so forth.

4.10. Data analysis

Mills and Birks (2014) describe data analysis as resolving a problem by fragmenting data into smaller manageable segments for analysis to reveal patterns that will be interpreted to make sense. Cloete and Mouton (2015) suggest that the main purpose of data analysis is to comprehend the various aspects of the collected data to determine any patterns or trends that can be identified or to establish the presence of specific themes in the data. For this study, data was analysed thematically.

4.10.1 Qualitative data analysis

Mezmir (2020) explains that qualitative data analysis refers to the interpretation of data gathered from sources such as interviews, observations, and documents and, thereafter, the presentation of the details of the data.

Qualitative data analysis may also be applied to make inferences about discoveries and describe issues in their natural environment. In many instances, qualitative data analysis combines the initial approaches of a rough analysis of the material (such as overviews and summaries of the

data) with methods of a detailed analysis (identification of themes) (Mezmir, 2020). The final aim of qualitative data analysis is to provide a generalisable report that has emerged from examining and interpreting various materials relating to the study. Creswell *et al.* (2007) explain three stages in analysing qualitative data: data reduction, constructing data displays (such as tables and graphs) and drawing conclusions. Data reduction involves putting aside information that seems irrelevant, categorising and coding. Categorisation involves the process of coding and labelling sections of interview transcripts into themes, concepts or similar features. The categories can be combined or integrated into a theory by interweaving similar data sets. Data displays involve displaying the data using various display techniques such as diagrams, pictures, figures or quotations. After a thorough iterative process, the researcher may conclude and verify their findings. The researcher can conclude and verify the credibility of their data during data verification and conclusion. For this study, the researcher audio-recorded and transcribed interviews and field notes to analyse them and gain insight into the participants' opinions, experiences and perceptions of the research topic (Grbich, 2012). The researcher employed thematic analysis to analyse the data collected from the participants.

4.11. Transcription of interviews

According to Adu (2019), transcription is providing a written account of a verbal conversation for analysis. Adu (2019) explains that while transcription may seem relatively straightforward, its relevance can only be maintained if adequately done by specific steps. For instance, the data collected during the interviews has to be transcribed verbatim. The interviews must be audio recorded and audible so that the transcriber can capture the interview entirely. This is crucial to the study as the researcher's field notes are merely an account of what he/she sees, hears, or experiences during the interview with the participant. Field notes are essential to the analysis process as they back up the recordings and capture the interactions with the participant in context (Lemon & Hayes, 2020). The researcher studied the field notes and transcribed the interviews simultaneously. This helped the researcher to verify the recorded information and to recreate the interview environment for the researcher to transcribe with context in mind.

The researcher transcribed the interviews verbatim, ensuring that responses were captured as they were recorded to ensure accuracy. All the interviews were conducted in the same language (English), allowing the content of the participant's responses to be preserved. In some instances, the researcher contacted a few of the participants to clarify specific responses they had provided but did not fully elaborate on during their interview. The researcher ensured that

the participant was available to proceed with the call and, secondly, comfortable discussing their response over the telephone. During these calls, the researcher noted down the clarifications the participants provided and further probed where necessary. The researcher could transcribe more truthfully after making further contact with the necessary participants instead of assuming the meaning behind their responses. This provided more accuracy when transcribing the data.

4.12. Methods of trustworthiness

The core purpose of research is to put the knowledge created through the study into practice. Therefore, it is imperative that research studies be recognised as familiar and understood as legitimate by researchers, policymakers, practitioners, academics and the public. Lincoln and Guba (1985), cited in Nowell *et al.* (2017), suggest that trustworthiness is one way that researchers can assure themselves and readers that the study findings are worthy of recognition. The authors achieved this by refining the concept of trustworthiness by establishing the criteria of credibility, transferability, dependability and confirmability to align the conventional quantitative assessment criteria of validity and reliability (Nowell *et al.*, 2017). The procedures for fulfilling the trustworthiness criteria are familiar to many, even those with differences in epistemology and ontology, as they rely on methodological arguments and techniques (Lemon & Hayes, 2020). While there are more expansive and flexible quality indicators in qualitative research, the researcher has employed the original, widely accepted and recognised criteria introduced by Lincoln and Guba (1985) to demonstrate trustworthiness in this study. The discussion below explains Lincoln and Guba's (1985) criteria for trustworthiness and how this study met each criterion.

4.12.1. Credibility (in preference to internal validity)

One of the leading precedents of positivism is internal validity, whereby positivists aim to warrant that their study measures or tests what it is intended to. Nowell *et al.* (2017) state that the qualitative researcher's equivalent is credibility (as established by Lincoln & Guba, 1985), which asks how congruent the study's findings are with reality.

Polit and Beck (2014) define credibility as confidence in the truth of the study, making this the most significant criterion. According to Donnelly and Trochim (2007), cited in Kumar (2011), "credibility involves establishing that the results of qualitative research are credible or believable from the perspective of the participant in the research". As qualitative research explores people's feelings, experiences, beliefs, and perceptions, it is accepted that the

participants are the best judges to determine whether or not the research findings accurately reflect their opinions and beliefs. Stewart *et al.* (2017) elaborate that credibility is the alternative to internal validity, and the objective of these criteria is to demonstrate that the study was conducted to ensure that the participants have been precisely identified and accurately described.

As this study explores the experiences, thoughts, beliefs and feelings of police officers working with counterfeit pharmaceutical products, the officers as participants can confirm the findings of this study as a true reflection of their perception of the research phenomenon. Therefore, the researcher selected the participants precisely, choosing those with firsthand experience on the research topic.

To ensure confidence in the accuracy of the data collected in this study, the researcher:

- Actively engaged with the participants in their natural setting to better understand their perceptions and opinions of the research phenomenon.
- Purposive and snowball sampling were employed to select the sample for this study. While most qualitative research includes the use of purposive sampling, the use of snowball sampling annuls charges of bias by the researcher in selecting the participants.
- Provide each participant who was approached with the opportunity to refuse to participate in the study to ensure that data was collected only from participants who willingly chose to participate and provide information freely. The researcher strived to create rapport in the early stages of data collection and motivated participants to speak openly during the interview.

4.12.2. Transferability (paralleling external validity and generalisability)

According to Donnelly and Trochim (2007), cited in Kumar (2011), transferability relates to the degree to which qualitative study results can be generalised or transferred to other contexts or settings.

Bassey (1981), cited in Shenton (2004), suggests that if practitioners assume their situations are comparable to the study's, they may relate the findings to their positions. Lincoln and Guba (1985) present a similar argument and propose that the researcher must ensure sufficient contextual information about the fieldwork sites is provided in the study to permit the reader to make such a transfer (Shenton, 2004). Kumar (2011) explains that although it may be challenging to establish transferability essentially because of the approach that qualitative

research adopts, to some extent, this can be achieved if the researcher extensively and thoroughly describes the research process adopted so that others may follow this process and replicate it.

This study contained a small sample and employed the qualitative research approach; thus, generalising this study's findings to a wider population may not be possible. Nevertheless, some observations could be generalised to homogeneous situations involving police officers or their specialised units or departments, especially during the investigation and exploration of counterfeit crime. In this particular study, using the same research methods to investigate the same topic but in a different setting and with a different demographical sample should be viable.

4.12.3. Dependability (in preference to reliability)

According to Donnelly and Trochim (2007), cited in Kumar (2011), dependability as a criterion to ensure trustworthiness in a qualitative study is very similar to reliability in quantitative research. The authors argue that dependability is related to whether the same results would be obtained if we could observe the same thing twice. Shenton (2004) explains that to address dependability in a study, the procedures within the study should be thoroughly detailed to allow future researchers to replicate the work to achieve the same outcome. An in-depth account of the study and the methods employed also permits the researcher to examine the degree to which the appropriate research practices must be maintained.

Dependability was achieved in this study by utilising a detailed, reliable and precise research approach, describing what was outlined and accomplished; operationally detailing data collection to address the specifications of what was done in the field; and reflective assessment of the study to evaluate the effectiveness of the process of exploration undertaken.

4.12.4. Confirmability (in preference to objectivity)

Donnelly and Trochim (2007), cited in Kumar (2011), explain that confirmability refers to the extent to which others could confirm or corroborate the study results. Confirmability is the qualitative equivalent of objectivity in a quantitative study (Shenton, 2004). The author further states that appropriate measures must be used to ensure, as much as possible, that the study's findings are the result of the participants' opinions, experiences and perceptions of the participants and not the preferences of the researcher. This criterion represents the level of assurance that the findings of the study are narratives and words spoken by the research participants and are free from the researcher's bias.

Confirmability in a qualitative study exists to authenticate that the findings are shaped by the participants' thoughts, ideas, and opinions more than the researcher shapes them. The researcher achieved confirmability in this study by providing a detailed explanation of how data was collected from the participants, along with how the researcher analysed it. This detailed account of the study's data collection and analysis process allows other researchers to inspect the adopted research approach, design and methodology and determine whether the same methods can create similar conclusions (Shenton, 2004). In addition, the researcher included indicators such as the reasons for theoretical, methodological and analytical choices throughout the study to enable other researchers to understand how and why certain decisions were made.

4.13. Ethical Considerations

Ethical concerns can arise from almost all aspects of the criminological research process due to the sensitivity of several research areas that criminology focuses on (Bayens & Roberson, 2011). The authors define ethics as the principles of morality, including the science of sound and the nature of what is right. For researchers, most ethical issues arise from three incidences. Firstly, the researcher is ethically obligated to conduct research neutrally and impartially, without personal moral judgments clouding observation. Second, certain standards of conduct are required when dealing with human subjects, and third is the issue of honesty in reporting (Bayens & Roberson, 2011). The following are the ethical considerations that the researcher has adhered to in this study:

4.13.1. Informed consent

Informed consent is defined as consent given by an individual who received adequate information about the nature of the study and who can decline to participate without any prejudice. To obtain informed consent, the researcher contacted the South African Police Services: Research Component to request their permission to conduct research using police officers from their commercial crime or counterfeit crime departments. The researcher explained the purpose of the study and provided a copy of the accepted research proposal, the interview schedule and all the relevant ethical consideration documents. The researcher assured the Research Component that the information provided by the chosen officers would be treated as confidential and that their identities would be protected. During the data collection process, the researcher thoroughly explained the purpose of the study to the participants. The researcher explained the benefits of their participation and how their contributions would greatly add to

the current knowledge of the research phenomenon in South Africa. The researcher explained to the participants that they had the right to decline to participate at the onset or any point of the study, should they wish to do so. The participants were assured that they would not face any consequences or prejudice should they want to decline to participate in the study. The researcher further explained that they have the right to confidentiality, privacy, and anonymity and concluded by explaining their participation requirements.

4.13.2. Anonymity

A research subject is considered anonymous when the researcher cannot associate a given information with the person (Maxfield & Babbie, 2017). The researcher assured anonymity to the participants and the Research Component of SAPS, ensuring that the participants were not associated with any identifiers that indicated that the data came from them. The participants were not asked for any information, such as their name, service number, branch or unit name, or office address. By assuring the participants of anonymity, the researcher founded greater trust between the participant and herself, which further enabled the participant to feel at ease to share her views on the research topic. The assurance of anonymity enabled the researcher to create rapport with the participants.

4.13.3. Confidentiality

According to Kraska and Neuman (2012), confidentiality means that a researcher can link information with a given person's identity but essentially guarantees not to do so publicly.

The researcher protected and treated the sensitive information from the participants with the utmost confidentiality. The researcher ensured that the participants did not disclose any personal details about themselves to allow the researcher to protect their identity and safeguard any information shared by the participants while ensuring that the information provided would not be traced back to them. To further ensure confidentiality, the data that was collected from the participants were kept under protection. During the data collection process, the researcher kept the audio-recorded interviews in an encrypted folder on a laptop with a password known only to the researcher. Field notes and the interview schedule were kept in a folder inside a locked cabinet to which only the researcher had access. The analysed data was stored on the researcher's laptop, which was password-protected to allow only the researcher to access it.

4.13.4. Discontinuance

The researcher informed the participants that they may discontinue the study at any stage of their participation should they wish to do so. Before data collection, the researcher informed

the participants that they had the right to decline to participate or discontinue the study. The participants were further informed that they may refrain from answering or continuing with the study if they feel that a question is too personal or jeopardises them or their career in the Police Service. The researcher stipulated to each participant that they would still benefit from the study's recommendations even if they decided to discontinue the study.

4.13.5. Voluntary participation

During the data collection process, the researcher provided the participants with an informed perspective of the study and assured them that their participation was voluntary. The researcher presented each participant with an *information sheet and consent to participate* document stipulating the details of the study and what was expected from them should they continue the study. The participants were told they could withdraw from the study despite signing the consent form. The researcher emphasised that refusing to participate bears no judgment, prejudice or favour to the participant. The participants were reminded that they might leave the study should they choose to do so and that there would be no negative consequences or repercussions towards the participant for their decision.

4.14. Limitations of the study

- Participants were initially hesitant to participate in the study due to the high-profile nature of cases involving the research topic. The participants were unsure of how much of their experiences they should share or whether speaking about their experiences with specific cases may have ramifications for them.
- Obtaining access to the correct department in Durban proved to be complicated. Despite obtaining gatekeeper permission from the SAPS Research Component, the researcher also had to obtain national and provincial permission before approaching the unit commanders to access the officers. This did stall the data collection process.
- Limited resources were available to the researcher, such as finances for travelling back and forth to the study locations. The researcher would schedule 3-4 interviews, but only one participant would be available upon arrival. In some instances, the researcher would reschedule with the participant only for them to reschedule again on the day the researcher returned to the location for the interview. This meant that the researcher had to reschedule several times and travel to the location on a separate occasion each time.

4.15. Solutions to the study's limitations

The points below show how the researcher overcame the challenges experienced during the study.

- The researcher assured the SAPS and each participant of the ethical considerations in place and explained how the study recommendations would assist the SAPS and other members who were not part of the study. The researcher reiterated that participation in the study was voluntary and that they had the right to refuse, further explaining that the study was being conducted to assist them. Therefore, the participants felt comfortable participating and completely expressing their views on the research topic.
- The researcher used her finances to travel to reach the participants as she did not receive a travel allowance or grant. As the researcher travelled independently, she was patient and rescheduled interviews for when it was most convenient for the participant to meet again. The researcher understood the demanding duties of the participants and was keen to carry out this study.
- The researcher provided all the necessary documentation to the national and provincial offices and, roughly two weeks later, received permission to meet and schedule interviews with the participants. While this did stall data collection, the researcher understood that obtaining all the relevant permission letters was necessary to collect data without any administrative hassles.

4.16. Challenges faced by the researcher

The challenges faced by a researcher are inevitable in any study. In this study, the researcher experienced intimidation from a few members of the study population due to her youthfulness. There were instances where the researcher had to provide documentation and proof of her credentials to the participants so they would feel confident about the purpose of her meeting. As a result, the researcher spent much time, which she did not initially cater for, creating rapport with the participants before conducting the interview. Some of the content discussed while creating rapport did not align with the aim of the study but provided a sense of reassurance to the participants and created trust between the researcher and participant, allowing the participants to share their experiences in the interview comfortably. Another challenge faced as a young female researcher is that she often had to enter the office buildings by herself to get to the participants. The lack of security when entering and leaving these office buildings posed a personal security threat to the researcher.

Lastly, the emergence of the COVID-19 pandemic delayed the researcher's fieldwork. Obtaining documentation from the relevant individuals during the onset of the pandemic proved tremendously challenging due to the lack of administrative assistance due to the rotation of administrative officers in law enforcement office buildings. The pandemic created delays in meeting with participants as direct contact and travel and movement were also restricted. Furthermore, the researcher had to ensure that the participant was in good health to participate in the interview, which sometimes caused a further delay in fieldwork if the participant was unwell or showed symptoms of COVID-19.

4.17. Conclusion

In this chapter, the researcher elaborated on the research design and the research methods used to conduct this study. The researcher discussed the exploratory research design and the qualitative research approach that the researher utilized to conduct this study. The researcher explained the sampling and sampling techniques that this study employed. For the purpose of this study, the researcher made use of non-probability sampling with specific use of the purposive and snowball sampling technique. The researcher described the data collection and analysis process along with the ethical considerations of the study. Furthermore, the researcher discussed the limitations faced and how they were overcome. In the following chapter, the researcher will analyse and interpret the data collected.

CHAPTER 5: DATA ANALYSIS AND INTERPRETATION OF THE RESULTS

5.1. Introduction

In this chapter, the researcher presents and analyses the findings of the data collected from police officers working with counterfeit crime in two separate units within the SAPS (Commercial Crime Branch and the Hawks). This chapter comprises two sections. Section A briefly presents the data in tables indicating the sample's gender, rank and years of professional experience. Section B analyses the data and presents the key excerpts of the participants' narratives while conducting interviews. According to Kraska and Neuman (2012), data analysis refers to a search for patterns in data. The authors suggest it may be a search for recurrent behaviours, objects, phrases or ideas (Kraska & Neuman, 2012).

SECTION A: PRESENTATION OF DATA

The researcher utilised in-depth semi-structured interviews to collect data from the officers. The researcher used an interview schedule containing predetermined, open-ended and close-ended questions to elicit the relevant data from the officers. The researcher used more open-ended than close-ended questions to allow the participants to openly and freely express their personal experiences and perceptions of counterfeit pharmaceutical crime and to obtain further information than that presented through close-ended questions. The questions within the interview schedule were classified according to specific themes. The interview schedule that the researcher used to collect data from the police officers consisted of six sections, namely:

- Section A: consisted of questions relating to the extent of counterfeit pharmaceutical products existing in South Africa;
- Section B: entailed questions relating to the training of police officers for them to be equipped with the necessary skills to detect counterfeit crime and, more specifically, counterfeit pharmaceutical crime;
- Section C: involved questions surrounding the legislature relating to counterfeit crime in South Africa;
- Section D: consisted of questions relating to the internet and how it may be used to facilitate criminal organisations that deal in counterfeit pharmaceutical crime;
- Section E: contained questions concerning the factors that contribute to the influx of counterfeit pharmaceutical products in South Africa and lastly,

- Section F: questions pertaining to the public health interventions that South Africa has in place to protect its citizens against counterfeit pharmaceutical crime.

5.2. Demographical data of the participants

This study's total sample size was twenty-five (25) participants. Elaborately, the research sample comprised fourteen (14) police officers from the Commercial Crime Branch in Prospecton and eleven (11) police officers from the Hawks, all of whom were based in Durban. The sample of this study included police officers with varying years of experience, different genders and from other ranks within the SAPS. The tables below illustrate the demographical data of the study's sample.

Table 4: A cross-tabulation of the participant's gender and the unit in which they are posted

Unit	Gender		Total
	Male	**Female**	
Commercial Crime Unit	12	2	14
DPCI (The Hawks)	5	6	11
Total	17	8	25

Table 4 above represents the gender of the participants and the unit in which the participants are posted. The study comprised 12 males and 2 females from the Commercial Crime unit, totaling 14 participants. The study also included five males and six females from DPCI (Hawks), totalling 11 participants from this unit. The total sample size for this study is 25 police officers, of which 17 were male and eight were female.

Table 5: A tabulation of the participants ranks within the SAPS

Rank	**Constable**	**Warrant officer**	**Captain**	**Colonel**	**Total**
Number of officers	4	7	10	4	25

Table 5 above displays the varying ranks of the officers. It shows the number of officers in each rank that made up the sample for this study. The study comprised four constables, seven warrant officers, ten captains, and four colonels, totalling twenty-five participants.

Table 6: A cross-tabulation of the participant's gender and their years of experience

Years of experience	Gender		Total
	Male	Female	
5 – 10	3	1	4
11 - 20		5	5
21 - 30	5		5
30 +	9	2	11
Total	17	8	25

Table 6 above represents the participant's gender and their years of experience. From the total sample of twenty-five participants, four participants have between 5-10 years of experience (three male and one female); five participants have between 11-20 years of experience (all participants being female); five participants have between 21-30 years of experience (all participants being male) and eleven participants 30 or more years of experience (nine male and two female).

Table 7: A tabulation of the participant's overall participation

Participant no.	highly engaged/responsive (spoke openly and at length about the issues)	moderately responsive (responded only to the questions asked, was guarded)	minimal participation (responded to a minimal extent, expressed reticence and/or disinterest)
Participant 1	✓		
Participant 2	✓		
Participant 3	✓		
Participant 4	✓		
Participant 5		✓	
Participant 6		✓	
Participant 7		✓	
Participant 8			✓
Participant 9	✓		
Participant 10		✓	

Participant 11	✓		
Participant 12	✓		
Participant 13		✓	
Participant 14			✓
Participant 15		✓	
Participant 16		✓	
Participant 17	✓		
Participant 18			✓
Participant 19	✓		
Participant 20	✓		
Participant 21	✓		
Participant 22		✓	
Participant 23	✓		
Participant 24	✓		
Participant 25	✓		
Total	**14**	**8**	**3**

Table 7 above displays the participants overall participation in the interview. The table illustrates that fourteen participants were highly engaged during the interview, 8 were moderately responsive, and three responded to a minimal extent. Overall, most participants spoke openly and extensively during their interviews.

The researcher identified that those participants with considerable experience (as a result of many years working in law enforcement) and higher ranking provided greater insight when answering the questions. Their knowledge appeared more extensive than that of those officers from lower ranks. The higher-ranking participants were also able to answer the interview questions more quickly and directly. The researcher acknowledges that while the above participants provided greater insight during the interviews, it does not infer that those with lesser experience or lower rank did not provide valuable responses. The researcher found that gender did not influence how the participants performed in the interviews.

It was apparent that younger participants were guarded in their responses, while older participants shared more of their experiences. However, the researcher noted that in some

instances, older participants provided responses that were not necessarily relevant to the research topic.

SECTION B: ANALYSIS OF DATA

5.3. The extent of counterfeit pharmaceutical products existing in South Africa

To discover information relevant to this research objective of the study, the researcher asked the participants the following questions:

1. What do you understand by the term counterfeit pharmaceutical products?
2. In your opinion, how do counterfeit pharmaceutical products exist in our society and South Africa?
3. How does the COVID-19 pandemic influence the demand for pharmaceutical products?
4. How does the demand for pharmaceutical products during the COVID-19 pandemic motivate counterfeiters?
5. Do counterfeit pharmaceutical products exist due to opportunistic events such as the COVID-19 pandemic and public demand?

When asked about their understanding of the term *counterfeit pharmaceutical products*, ten participants associated the word *fake* with their understanding of it. They understood *counterfeit* to be fake and associated *pharmaceutical* with the word to understand the term *fake medicines*. The following are the responses to the understanding of the term *counterfeit pharmaceutical products*, quoted verbatim and with no corrections made to the language:

> *It's the fake of the original but if you want to go deep into it, it's the manufacturing of items which are the reflection of the original but they are not. It's done with the intention, uhm, the purpose of making money by selling it at the cheaper price* (Participant 1).

> *Your counterfeit pharmaceutical products are obviously products that are not from the original supplier, it's an illegitimate supplier that's trying to use that same brand and put that product on the market to immolate the original product.* (Participant 12).

> *To me, it is medication that is not authentic, its fake and it's cheaper. It's a product that is substandard and inferior quality* (Participant 13).

> *Fake pharmaceutical products, something that is not the original and in terms of pharmaceutical, it poses as such a problem because, I mean, the original is*

manufactured in a specific manner for a specific goal and we don't know if our counterfeit products are going to achieve that purpose (Participant 16).

My understanding of it is, its non-generic, its non-original, it's substituted and could possibly contain ingredients that could be harmful to anyone because it hasn't been scientifically approved (Participant 24).

Regarding the question of how counterfeit pharmaceutical products come to exist in our society, the participants expressed that porous border control at the South African borders is the main reason as to how counterfeit pharmaceutical products come to exist in South Africa:

Well I think, with regards to coming to exist in our society is getting transported across the border I'd say because I don't believe that our people on this side are able to manufacture these products and like I said, experience on two cases of this, the individuals that were arrested were from across the border, they were foreign nationals and these things came from out of the country so that's how they come into existence in our country (Participant 9).

They are imported from countries like China, India and sometimes even Pakistan. They cross through our borders, maybe not in big amount at the airports but our sea ports are where they are coming into the country in large quantities for distribution (Participant 13).

They come through via other overseas countries like Chinese and other countries (Participant 14).

They are normally coming in through the ports and I would say the access control is impaired because of the reason being border police not doing their bit of it fully. Also, SARS is not doing everything to their fullest power to stop these things so if it stops there and at all the border posts, you wouldn't get any counterfeit in the country. That's what I would say, those are the weakest points for that to come in here that is why it's coming into this country (Participant 17).

Most of them are brought in through the borders and unfortunately there's not much control at the borders, it's easy for them to bring in products (Participant 20).

Its insufficient border control, customs and excise need to put in stricter terms and conditions and probably also a big of corruption that allows these things into the country because obviously people get paid to allow it in, you know (Participant 21).

Some participants also expressed that counterfeit pharmaceutical products come to exist in our society and in South Africa as a result of homemade or clandestine medical labs:

They come through the borders of our country, mostly via shipping, they are also created in this country by clandestine labs but in most cases, as I said, the come through the ports (Participant 10).

We have a lot of cross border transfers so being experienced and working at the border as well, I noted that these things happen across the borders and also through within our societies, certain homes where they actually manufacture these products as well (Participant 22).

Well, as I said to you, it's more like products that have been counterfeited, like medical supplies, that's how I look at it, that people make money out of these products, it's shocking. You know you get these home-made labs and stuff like that where they go ahead and they make these things, we had a lot of labs that were taken down where people make these sort of medication, they take medication and they use they own type of things, cheaper or not standardised. It's not approved sort of ingredients used to make medication but there also you get medication that's utilised and also medication that is mixed with other ingredients which could be very very dangerous (Participant 25).

In addition to poor border control and homemade laboratories, participants were also of the opinion that counterfeit pharmaceutical products come to exist in our society because they are cheaper to purchase in comparison to the original and that counterfeiters take advantage of this fact to make easy money:

It's because they are cheaper to access and they come from the black market and there is more money to be made out of, by uh, syndicates, by organised crime syndicates. But basically, it's all about making money (Participant 1).

It exists because the medicines are very expensive so now it causes people to find other means and poverty as well too. Besides medicines being too expensive, people are not employed and need a chance to make ways for themselves (Participant 7).

It is mostly made from people that want to make quick money without thinking about the negativity that it has economically and also on the people that's using these products because you never know what is placed into that product (Participant 15).

On the issue of how COVID-19 influenced the demand for counterfeit pharmaceutical products, the majority of participants expressed that the fear of contracting the sickness placed panic and desperation in people in South Africa and around the world, which created a niche for counterfeiters to take advantage of:

People were scared of getting sick and others were sick and since there was not a lot of money around, they resorted to counterfeit medicine in order to stay afloat (Participant 1).

The COVID-19 pandemic instilled a lot of fear and desperation in people. You must remember that the onset of Covid-19, so much of people were dying and many people lost their loved ones so they were scared for their own families and they bought anything that they could find. Whether it was a legit product or not, people bought it and they paid whatever price was asked for it because of the fear of being sick or getting sick. So with this pandemic, medicinal products was in heavy demand, it was being bought more than it normally is and that demand continued for a while (Participant 5).

Basically people getting sick, people dying, people required more medication and they don't care about how they get the medication or what medication they get but as long as they get better (Participant 8).

Well I think a lot of people obviously, with the Covid-19, they got scared in terms of COVID-19and then they were looking for a whole lot of alternatives in terms of medication to assist them so that they didn't catch the Covid-19, so I think there was a lot of fear mongering going on in terms of people getting the fright and then wanting to see what they can use to assist with a new virus that was out there (Participant 12).

When asked how the demand for medicines during COVID-19motivated counterfeiters, it was highlighted that counterfeiters acted on people's desperation to possess medicines if they got sick and used this demand for financial gain:

It motivated them to make more counterfeit products, they wanted to make more money from people's desperation, you know, people didn't want to get sick and they didn't

want to make their family sick. They see it as a chance or an opportunity to take advantage of a situation and to make money from it (Participant 13).

As I said, it's a quick scheme for them, it's an opportunity. An opportunity to prey on people's fear of illness and their desperation to not be sick (Participant 18).

I think the fear in people built that opportunity for them to, people were scared to get sick, basically, and they would just buy whatever they came across (Participant 22).

Well, in most cases, due to the fact that people were so frightened of dying, many people don't prepare for death, none of us I think prepare for death and these counterfeiters take advantage, these criminals take advantage of our people and you know what, at the end of the day, you or I, if something is going to safeguard me and it's going to make me better and if I'm convinced, why not?, you'll try it, that's what happens in this cases (Participant 25).

On the matter of whether counterfeit pharmaceutical products exist as a result of opportunistic events (such as COVID-19 and public demand), the majority of the participants (17 in total) expressed that they felt that counterfeit pharmaceutical products exist due to public demand or COVID-19:

100%, definitely. Not entirely though, not entirely because there is always a demand for it. The two typical examples that come to mind is the Viagra and Cialis tablets so there is always a demand for that. Because of the price of it, the fake ones are much cheaper, well, the counterfeit, and people tend to buy that so there's always a demand. Yes, the pandemic did influence the demand in terms of a particular or specific pharmaceutical counterfeit but the demand is always there (Participant 2).

Yes so it was an opportunistic event for financial gain for the individual. They coming in with the hope that there is a medical condition that's going around that they can benefit from financially, in terms of suppling the same, or we suppose it's the same drug. Public demand, there are individuals that cannot afford the original medication so they result to going for the counterfeit stuff but that would be a very low percentage, I'm guessing because like I said, people's lives are involved (Participant 9).

Yeah, most definitely. Not many people can afford proper medication (Participant 25).

On the contrary, when asked this question, some participants expressed that counterfeit pharmaceuticals existed before COVID-19 or public demand:

> *Partly. It's an organised crime but also, whether there is opportunistic events such as the pandemic, it will increase. It is not only restricted, it will continue even beyond the pandemic but obviously, the pandemic exacerbates it. I would say that it exacerbates it* (Participant 1).

> *I won't say it only exists through that, it exists as a tool to make money. It's an easy way to sell things to the underprivileged, the people on the lower bred level to access these things* (Participant 17).

> *No, not really. It's a business and its all organised crime. The pandemic, yes, it helped boost the situation but the fact that we deal with organised crime, organised crime has the tendency to arrange and organise a lot of things because organised crime is just looking for money and they want to make a quick buck on anything they can have* (Participant 3).

Many participants expressed that counterfeit pharmaceutical products refer to products that are fake, unauthentic, or fake of the original. The participants expressed that porous borders, accompanied by the lack of trained customs officials at the borders, account for counterfeit pharmaceutical products coming to exist in our society. It was highlighted that counterfeit pharmaceutical products come to exist because they are cheaper to purchase than the original product and that COVID-19 influenced the demand for such products as the pandemic was greatly feared. The participants indicated that counterfeiters were motivated by the demand from society's panic over being ill and the financial gain the pandemic provided. They continued by stating that counterfeit pharmaceutical products have been in existence for some time, but public demand and the COVID-19 pandemic, coupled with fear of fatality, exacerbated the need for accessible and affordable medicine irrespective of their potential harm.

5.4. The training of police officers to detect counterfeit pharmaceutical products.

The selected participants in both study locations were asked the following questions to gather data on their perceptions and thoughts regarding the training of police officials to detect counterfeit pharmaceutical products:

1. In your experience, what training is provided to police officers to equip them to detect counterfeit pharmaceutical products?
2. What is the duration of the training that customs officials/police officers receive?
3. How often are law enforcement officers provided with training?
4. Are there any prerequisites required to be trained as an officer to detect counterfeit pharmaceutical products? If yes, please explain what the prerequisites are.
5. When did the last training programme for customs/police officers take place?
6. Do customs/police officers receive follow-up training to be up-to-date with current and modern detection techniques?

When asked about their training, some of the participants highlighted that there are workshops or seminars in place to train police officers to detect counterfeit pharmaceutical products:

> *Uh, there is a formalised training, there is also an informalised training. Formalised training includes understanding the legislation, understanding the procedure for investigation, the entire procedure for investigating the counterfeit including the prosecution thereof, that's the formalised training. But also you have the informalized training, where, through lectures, through visiting sites where counterfeit goods are being identified, uh, yeah, I think basically it's about that, one on one and on the job training. So whenever there is a scene, people will be called in and everybody will get together and go through the process of investigation so there is a formalised training and also informal training* (Participant 1).

> *We attend workshops on a regular basis to tell us what products are out on the market, what we have to look out for* (Participant 19).

> *We have various workshops, training workshops which are usually a day to a week on various things. I mean I was trained before Covid on the same pharmaceutical things and that's where I learnt about the fraudulent Grandpa's and even Zambuk and all these kind of things* (Participant 21).

Despite some participants stating that there is training provided, several participants expressed that little to no training is provided to police officers to equip them with the necessary skills to detect counterfeit pharmaceutical products:

> *Very little. Very very little. The reason as to why I say very little is that the only people that are properly trained is the customs and excise officials* (Participant 4).

I will be honest to you, my sister, there is nothing. There is nothing in my department, no one have undergone such training here that I am aware of. Whenever there is any information, it goes through the crime intelligence then it goes to the commanders then we are told that there is an operation and such and such place then we go and conduct searches at those businesses and nothing more (Participant 6).

Participant 5 highlighted that if training is provided for counterfeit crime within the SAPS, only senior officers receive this training. It is then expected that these officers return from their training and pass on the skills that they have learnt to the members who did not have the chance to attend the training:

Very little. It's normally just a workshop on Intellectual Property. Sometimes we have seminars or conferences on how to identify counterfeit products, the processes, procedures of handling them and how to destroy them but other than that, it's generally senior members that receive the official training and then they come back and teach those skills to us (Participant 5).

It was also brought to the researcher's attention that training is not always provided to officers by the SAPS but rather from an external source, such as the brand ambassadors or the patent attorneys:

There is not a lot, most of it is on the job training. We do get training which is provided by the brand owners and sometimes the patent attorneys will come and do some training but generally it's on the job training (Participant 13).

We used to have workshop for 2 days with the brand attorneys, they will come and give us some clues (Participant 14).

As a new product comes on the market and the brand owners feel that there are certain products that are counterfeit, they come and give us training on that (Participant 15).

The police attend seminars and workshops which are presented by the brand officials where we are taught or shown what the products should look like and where the counterfeit product differs from the original (Participant 20).

On the question of the duration of their training, participants who did not receive training were unable to answer, whilst those who did receive some training provided various responses:

Sometimes it's a one day workshop or sometimes 3 days (Participant 5).

It depends, I went on a training course when I first got here and it was for about a week and that was done by the patent attorneys. Now and again the patent attorneys will come down for a day or two (Participant 12).

Normally one or two days (Participant 20).

The courses are generally from 5 day and up but workshops and seminars are like 2 days, 3 days, sometimes even a day (Participant 22).

It was about 2 weeks (Participant 25).

On the issue of how often police officers are provided with training, the participants provided varying responses. A few participants stated that training to detect counterfeit pharmaceutical products only happens on a "needs only basis", meaning that training will be provided only when it is deemed necessary. The participants had the following to share:

It's done on a needs basis, right, so it's done on a needs basis, you can say needs analysis basis or whatever the case is. If they give you a computer, they need to teach you how to use the computer but this is not one of the priorities seen by SAPS (Participant 4).

I think it's only when there's availability, it's not like a routine thing where they say "you know what, we need to be updated with certain training, counterfeit brands that are trending". I do know that our Head was sent for an international course in Tokyo last month (Participant 16).

Some participants indicated that training is ongoing as they are continuously learning while working in the field:

Training is an ongoing process (Participant 3).

It's continuous because the brand owners, they train us then a specific department like the DTI, they come in and they train (Participant 18).

Some participants expressed that training does not take place very often, and some even expressed that training only happens every few years:

Not too often, there are courses but not too often. It just depends on the section where you are if the people in charge in that section want those people to go to courses or training then they go but not too often (Participant 7).

Very rarely. That is one of the downfalls of the police force. There's so much of police officials and there's so limited resources and funds for training so not everyone is being sent for training or kept updated with the new trends as such (Participant 10).

I think it's every 2-3 years, it's not often, sometimes we just learn from working with other experienced members (Participant 13).

If there is a product and they see that it is very frequent on the market then they will. It's probably about every 3 to 4 years (Participant 15).

When asked if there are any prerequisites to be trained as an officer to detect counterfeit pharmaceutical products, some participants stated that there are prerequisites such as the officer holding the rank of detective or sergeant and above. The participants shared the following:

In terms of the Counterfeit Goods Act, you have to be recognised as a counterfeit goods officer and in terms of the police, you have to be sergeant and above. A constable can assist but won't be part of the active investigation, they can't investigate matters, they are not counterfeit good officers, they can't apply for a warrant and they can't execute it (Participant 12).

I think you have to be sergeant and above to work on counterfeit cases (Participant 13).

Yeah, you must be a sergeant and over to execute a counterfeit goods Act warrant and in terms of the counterfeit goods, only a sergeant and above can be deemed as an inspector in the Counterfeit Goods Act. So you have to be over the rank of sergeant, sergeant and over (Participant 17).

Despite some participants being aware of the pre-requisites, some participants expressed that there are no pre-requisites required:

Not that I know off. I think it just depends on the department you're working in. With us being on the commercial crime side, we do stand the opportunity to get training done. There was an individual from the Reserve Bank that came and did some training with us on counterfeit notes. It depends but you don't really need anything (Participant 9).

Uhm, no, not really. They normally give the training to any officers, no pre-requirements, no (Participant 20).

No, not really, you must just be aware of what to look for so maybe a quick training session for a couple of days just for the major ones like the medicinal and clothing counterfeits (Participant 21).

The researcher asked the participants when the last training programme occurred, and the participants voiced differing responses. Six participants were not sure of when they had last been provided with a training program to detect counterfeit pharmaceutical products:

I'm not sure because I don't see anything anymore. I would have seen call out instructions for training but there was nothing (Participant 6).

I'm not sure, I'd be lying if I guess (Participant 16).

Some participants indicated that they had received training before COVID-19:

I'm not sure, but it was before Covid (Participant 3).

Ay, the workshop, when it was? A long time ago, it was last year if I'm not mistaken (2021) actually not last year, during Covid time, we didn't have time for this thing, the whole of last year and year before we didn't have because of Covid, we were not allowed to come together (Participant 14).

I'm not sure but prior to Covid (Participant 18).

It was before Covid so 3 years ago (Participant 21).

It was also highlighted that some participants received training between April and June of 2022:

May 2022 (Participant 4).

I did attend one this year (2022) (Participant 19).

I think it was June this year so approximately five months ago (June 2022) (Participant 20).

I think it was at the beginning of this year (2022), it was maybe in April or May (Participant 25).

The final question in gathering data on police training pertained to asking participants if they had received follow-up training to be up-to-date with current and modern detection techniques. Some participants stated that there is training to keep officers updated:

Yes. As the counterfeiting syndicates evolve, so with us in law enforcement, we need to evolve as well. So we have training workshops and most workshops are held together with law enforcement, customs and excise and your prosecuting authority where we have prosecutors coming through and giving us insight to what to look for and how to investigate specific dockets so that we can improve our conviction rate (Participant 3).

Yeah, we do some, for like a day, we do something on modern investigation technique. Police officers, especially detectives, they go for the "Resolving of Crime" program. That teaches you the basic of investigation and collecting of evidence and stuff like that. But whenever something new comes out and it eventually comes to the police, we do get like a 1 day or 2 day course on it (Participant 9).

Yes, when the resources are available or the experts are available, remember that we get experts from outside so when these people are available, we utilise them and our training is with the different role players, you get customs people there, the NPA, we interact more with the NPA because we present cases as detectives, we also get people from VisPol and the commanders as well and now and again, we send our senior officers (Participant 25).

Contrary to the above, many participants mentioned that they do not receive follow-up training and often have to educate themselves from their experiences in the field or wait for a senior member to receive training so that he/she may pass that knowledge onto the remainder of the team. Participants shared the following thoughts:

No. We have to learn and update ourselves based on what we see when we out there doing raids. We have to update ourselves basically (Participant 5).

It should be like that but sometime you just get training. Like commercial training, it has got a lot of levels. You know, I should have finalised all my trainings but there is nothing anymore, it's just gone quiet. You know sometimes, we use our own experience, it's an instinct that works here (Participant 6).

No we don't, I haven't received anything. You just learn as you go along. You build your own knowledge as you work different cases (Participant 13).

They do but not as often as they need to. In that case, it would just be one out of 10 police officers so it's something specialised obviously which we lack the resources, lack

the knowledge. So, it won't be like the whole team getting the training, it would probably be one out of the batch (Participant 16).

From the responses discussed above, it is indicative that there is training provided to police officers to equip them to detect counterfeit pharmaceutical products, but not all officers receive this training. It was noted that sometimes, training is provided by an outside source, such as the brand ambassador or the patent attorney. The participants expressed that while training is available, it is sometimes only available to senior officers, who are required to attend the specialised training and update and educate the rest of the team upon his/her return. The study found that training is usually 1-3 days long and approximately five days long when courses are provided. The participants expressed that training does not occur too often and is sometimes provided only when necessary.

In contrast, others stated that training is ongoing as they educate themselves from their experiences in the field. While some participants noted that training last occurred before the onset of COVID-19, others reported receiving training during 2022. The officers expressed that they receive follow-up training, which is not frequent as they often educate themselves from their fieldwork.

5.5. South African legislature surrounding counterfeit crime

To collect data on the efficacy of the legislature surrounding counterfeit crime in South Africa, the researcher asked the participants the following questions:

1. The Counterfeit Goods Act 37 of 1997 protects brand owners from having their trademarked items from being counterfeited. In your opinion, is the current Counterfeit Goods Act 37 of 1997, sufficient to combat counterfeit crime in South Africa?
2. The latest amendment to the Counterfeit Goods Act was in 2001. Counterfeiters have advanced since then. What does this mean for law enforcers?
3. With your experience in mind, what are the pitfalls of the Counterfeit Goods Act 37 of 1997 that make it easier for counterfeiters to escape punishment?
4. In your opinion, how is the legislature surrounding counterfeit crime limited in South Africa?

When asked about the legislature surrounding counterfeit crime in South Africa, specifically the Counterfeit Goods Act, several participants expressed that this law is currently sufficient and works well to curb counterfeit crime in the country. They also expressed that while this

Act has worked in the past and continues to be in use, it still requires an amendment to provide for the prosecution of more recent issues of counterfeit crime, such as counterfeit pharmaceutical crime:

> *I think it requires some amendment, some trimming here and there because there is always new development and new trends that are coming out so, to a certain extent, I think it needs to be, uh, it needs some pruning with a lack of a better word* (Participant 1).

> *At this stage, it's working so one would say "yes, it's sufficient". Yes, laws, trends, threats, threat analysis changes all the time so one would never know when legislation will have to change but currently, its working, I would say its sufficient* (Participant 2).

> *It is sufficient according to the registered trademarks that you have on place because the Counterfeit Goods Act acts wonderfully if you got your thing protected, your trademark, if you doing Coco Cola, if you doing Close Up or you doing Colgate or you doing Polo, whatever brand, if the brand owner, the brand protection managers invest properly to protect the garment, they come on board and they do the raids, your garment will be well protected with the Counterfeit Goods Act. I don't see a loophole where they can get out, yeah, yeah, that's what I would say* (Participant 17).

> *I would say it covers everything, I think they can make a few changes relating to a couple of things but in order for the detection and all that, I don't see it, there are a few things that I would personally change , it's not major because I've been working with it so long, I know* (Participant 19).

> *Look, in order to detect counterfeit goods and what's brought into the country, customs needs to be trained properly to detect counterfeit goods or not, the border control needs to be improved on in order to avoid counterfeit goods from coming into South Africa, the borders are porous in other words, let me put it that way. We have an excellent law but it's not being effectively used* (Participant 24).

The above verbatim quotes provide the view of participants who portray that the Counterfeit Goods Act 37 of 1997 is sufficient to combat counterfeit crime in South Africa. In opposition to the above views, some participants expressed that the Act does not suffice:

> *Remember we said the brand ambassador of the item, now for instance, if I as a police officer, for some reason, have some trained knowledge of a product being a counterfeit,*

> *the first thing you get asked in court is "are you an expert in this field?" which we obviously not and secondly, if you are not prejudiced in any way why are you being the complainant? For instance, your piracy DVD's, if an individual is arrested for selling piracy DVD's, they ask you how you are being affected by it because if the owner of that movie is not complaining then what's the problem? So the law is very, I'd say, for criminals, it makes it very easy for them to get away with this stuff, this counterfeit stuff so I don't agree with that Act of 1997* (Participant 9).

There were three particular responses regarding whether the Act suffices or not, that the researcher considered noteworthy. A participant who expressed that the Act was not enough to combat counterfeit crime included in his response that should the owner of a product that was counterfeited not come forward to lay a complaint, then the court will not hear the matter:

> *Because if there's no owner to the product, the court does not entertain it. So, for argument sake, if you have a product that's brought in from overseas and there's no representative for it here in South Africa, the court does not entertain it because they want to interview the owner of the product. We going a bit off from the pharmaceutical here but if you take your counterfeit Nike and Adidas, it's still being sold on the street because we can't get the owners of this product to come to court to lead evidence, they need to specify their brand marking and what makes that product a counterfeit compared to the original so nobody can actually give proper details* (Participant 11).

Participant 6 highlighted that the Act does not suffice because it does not lead to a proper sentence fitting for the crime:

> *My problem is the justice system. If you arrest a person with counterfeit goods, the person gets a bail, okay there's nothing wrong with that but when it comes to sentencing, it doesn't discourage the counterfeiters, it doesn't at all, it doesn't send them any message, person just gets a fine or suspended sentence and that's it, person then goes back to doing the same thing, sentences are not a deterrent at all* (Participant 6).

Participant 13 expressed that the Counterfeit Goods Act embodies processes that law enforcement cannot always meet in a timely manner. As a result, the case does not end up being heard in court, leaving counterfeiters to continue selling their merchandise:

I don't think so. Majority of the time, it leads to the suspect getting only a fine, it doesn't lead to prosecutions very often. It also has time frames and if something is not done in that time then we have to return the counterfeit products to the suspect and he will go out and continue to sell them like normal. It gives the police a very tight rope to catch counterfeiters because there is a lot of processes involved in a short period of time. If we can't meet these processes, these counterfeiters will take their products and continue to sell them on the street as if they did not even get caught in the first place (Participant 13).

When asked what it meant for law enforcers that counterfeiters have advanced since the last amendment to the Counterfeit Goods Act 37 of 1997 in 2001, many participants stated that it meant that South Africa was behind in terms of the law being able to cover contemporary counterfeit crimes such as the counterfeiting of pharmaceutical products. The participants shared the following views:

It means that our legislation, uh, it's far behind and it's a bit difficult for a police, in some instances, to enforce. There are new trends that are coming in so in terms of 21 years, you can imagine what developments has happened during that period. So, our legislation is not really up-to-date yet (Participant 1).

It means that we are behind and that it's harder for us to make arrests for counterfeiting crimes (Participant 5).

We have to catch up. It's as I said earlier, we are far behind, we are following them, they start first and then we follow (Participant 7).

It means that they have become more skillful in the act of the crime but a lot more difficult for us because from 2001 to now, obviously, it has advanced again and our legislature hasn't changed and neither has our training changed (Participant 9).

It means that it is harder for us to enforce the law because it is old. If the counterfeiters have changed then the law must change to cater for their new ways of committing the crime (Participant 13).

We are way behind counterfeiters, they are two steps ahead of us in terms of their manufacturing of counterfeit goods and our detection rate of counterfeit goods is low (Participant 24).

When asked what the pitfalls of the Counterfeit Goods Act 37 of 1997 are that make it easier for counterfeiters to escape punishment, the participants provided varying views as they had different experiences working with this Act:

Some participants expressed that a vital pitfall of the Counterfeit Goods Act 37 of 1997 is that the kingpins of counterfeit syndicates were not being brought to justice despite the existence of this Act.

Participants indicated that it was merely the low-ranking runners within the syndicates that were apprehended and that such individuals are easily replaced should they get arrested, thus ensuring business proceeds as usual:

> *Maybe, uh, in my view, uh, it does not address the issue of the kingpins. The focus is always on the runners, the guys that are found with the counterfeit goods so there is not really much focus on the kingpins* (Participant 1).

> *My opinion is that the kingpins, we often arrest the runners but the kingpins hide behind the runners so you arrest the runner but you don't get to the main person that's behind the counterfeiting* (Participant 20).

> *Well they usually catch all the, usually its syndicate related, they catch the low people, the runners they call them and they don't identify the top kingpins and that's usually internationally based* (Participant 21).

> *I would think, go to the source of the problem or try to eradicate the source of the problem. What we have now, we eradicating the runners, the small fish, and then take these small fish out and new small fish come, take those out and new small fish come, we not dealing with the problem itself* (Participant 22).

The participants also expressed that the law's leniency is a pitfall of the Act. The participants stated that it is unlikely for the courts to issue a term of incarceration for counterfeiters. Instead, they are given a fine and released. It was highlighted that counterfeiting is not viewed as a serious offence until a drastic or fatal incident occurs as the result of a counterfeit product:

> *If you look at history, there has never been a case where counterfeiters got a term of incarceration because the way in which the law is designed, counterfeiting is a slap on the wrist. It's not treated as serious as it ought to be.*

Only if you have a situation, just say for example a person took a cough syrup and it was counterfeit and they passed on as a result, then only will it be taken seriously. And also, most of the time when these people are getting caught, they get a fine, if I'm not mistaken, I think the highest is R3000. They get a fine and then the released. If you look at it, that R3000 fine that you give him, he will make that same money in less than a day. The laws are not stringent and hard with regards to those people that are being charged for possession of counterfeit (Participant 4).

I think the major pitfall for me is that the law mainly warrants fines. It doesn't see counterfeiting as a dangerous offence so very few counterfeiters actually receive prison sentences (Participant 5).

I never heard of anyone being convicted or given a sentence, they are only given fines. So if you have money, you've been doing counterfeit for some time and then you are fined to pay, it's not painful to pay because either way, you never got it legally, so you can pay and then you continue (Participant 7).

I would say that the Justice Department does not taking this seriously, they would tend to give fines instead of convictions or a suspended sentence instead of time in prison because they do not look at Intellectual Property as a serious crime, they tend to look at it as not as serious (Participant 10).

I think lenient fines, lenient sentences such as low fines because I can just pay an amount and then carry on. Also, another thing is that if it's a company that is keeping and selling these counterfeit things, they don't normally get blacklisted and that's a big problem (Participant 16).

Participant 13 indicated that the prescribed time frames included in the Act, which law enforcement has to act within, is a pitfall:

I think it's the processes that the Act prescribes to law enforcers and also the time frames that it requires us to follow. There is too many things that need to happen in a small amount of time. You have 3 days to get a complaint statement and 10 days to apply to the court and if you don't then we have to release the goods and all the work done so far is wasted. Sometimes if the brand is international, 3 days is not enough for us to contact them for a complaint statement, its difficult (Participant 13).

Participant 1 indicated that a pitfall of the Act is that it does not address the issue of where the product originated. The participant expressed that if the country of origin is identified, it would be easier to pinpoint where exactly counterfeit pharmaceuticals are coming from, and the issue of counterfeit items can be addressed with that specific country regarding the export of products from them into South Africa:

> *It does not address the issue of country of origin where the items come from. So maybe, in terms of the international law, it needs to be improved because the countries have got a certain responsibility for ensuring goods that are exported from their country that they comply with the international standards. As it stands now, the responsibility seems to be falling on the country where the items are identified, there is not much follow-up that is done in terms of where the items come from and the country's taking responsibility of that, I don't know if I'm making sense to you* (Participant 1)

Participant 10 highlighted that a pitfall of the Act is that it is not up-to-date and further stated that training on how to enforce the law is not provided to law enforcement officers. The participant expresses that if officers are not trained on how to enforce the law or how to identify counterfeit products, they will not be able to police counterfeit crime:

> *The law is also not up to date, there is legislation but if people are not trained in enforcing it then they not going to be able to enforce it. Training is important to be able to identify certain common brands. If you don't take a specific medication that being counterfeited then how will you be able to identify what's on the street? I have to be trained for that* (Participant 10).

From the participants views on this question, the researcher gathered that the major pitfalls of the Counterfeit Goods Act 37 of 1997 are that the leaders (or rather, the kingpins) of the counterfeiting syndicates are not being apprehended, but the lower-ranking individuals (the runners) are being arrested and then later replaced to continue with the illegal trade as usual. The responses on this question also highlighted that the law is lenient regarding counterfeiting. Some participants indicated that counterfeiting is not seen as a serious offence, resulting mainly in fines as a means of deterrence by the courts. The participants expressed their view that the Act rarely results in incarceration for counterfeiters and is only paid attention to when a severe or fatal incident occurs.

When asked how the legislature surrounding counterfeit crime is limited in South Africa, participants expressed the following views:

Maybe sentencing and punishment. Sentencing should be much more stiffer. Yes, there should be much more stiffer sentencing which will serve as a deterrent. You know, at the moment, I will say that sentencing is lenient and it does not discourage people from continuing with it because people will pay money and get out of it. And also, there should be much more emphasis on attachment of assets. You know, there should be more emphasis on following up on the proceeds of that crime or that particular crime. So, you have been arrested, found with counterfeit goods, convicted and everything, goods have been confiscated, its fine. Then now, we must follow up to see what you have made out of this whole business in terms of money laundering and what have you done with the money that you made from this. These are the proceeds from crime and they should pay much more emphasis on the financial investigation of the suspect (Participant 1).

If you look at it, the laws are designed to not incarcerate those people that are convicted. The laws looks at this thing like, for example, we give you ADR, which is Alternate Dispute Resolution which means like you come in, we provide you with counselling with regards to the entire thing, you promise not to do the entire thing again and then you go on and do the same thing. If the laws were designed that for the first time they give you a fine, it should be implemented that there shouldn't be a second time, the second instance should be direct incarceration. There shouldn't be the ADR process happening for the second time. So if you're a second time offender, that's a person that needs to go straight into incarceration. I think it would be better that way there (Participant 4).

I think lenient fines, lenient sentences such as low fines because I can just pay an amount and then carry on. Also, another thing is that if it's a company that is keeping and selling these counterfeit things, they don't normally get blacklisted and that's a big problem (Participant 16).

The time frames are not enough, you need to have more time to get the subpoena's that are necessary to do the searches and all that stuff (Participant 20).

Okay, uhm, the time frame of certain laws and legislature is insufficient. We have certain time limit placed on certain laws, such as obtaining warrants, such as obtaining warrants for searches and seizures and for seizing items so with that, you get given a

period of 3 to 4 days or sometimes even 2 days so it just causes a restraint on you effectively doing what you need to do to eradicate these goods (Participant 22).

The participant's views expressed above highlight that the Counterfeit Goods Act 37 of 1997 is limited in terms of its severity. Several participants indicated that the Act did not provide strict enough sentencing, resulting in failed deterrence attempts towards counterfeiters. The participant stated that fines are issued and that this method of punishment for counterfeiting pharmaceutical products simply leads counterfeiters back onto the street to continue selling their products. It was also highlighted that the time frame stipulated within the Act for specific procedures that police officers have to conduct to take the matter to court is insufficient, causing fewer convictions for counterfeiting pharmaceuticals.

5.6. The use of the Internet to facilitate criminal organisations dealing in counterfeit pharmaceutical products

Intending to gather information on how the internet may be used to facilitate criminal organisations that deal in counterfeit pharmaceuticals, the researcher asked the participants the following set of questions:

1. With the internet at our fingertips, how does this tool prevent law enforcement from curbing counterfeit crime in South Africa?
2. Does the internet protect criminal organisations or make them susceptible to easier detection when using the internet to commit counterfeit crimes?
3. In your opinion, why do criminal organisations resort to using the internet to engage in counterfeit crime?

When asked how the internet prevents law enforcement from curbing counterfeit crime in South Africa, the participants expressed the following views:

That's a tough one because it makes communication, uh, detecting suspects very hard because communication is done by unidentified people and fake emails and fake IP addresses.

So, all those communication channels, it makes it difficult, you are dealing with faceless people. In all probability, in fact, at all times, their identities are always there using fake identities so you are at a point where until you intercept the items, you do not know the identity of your suspects. Yea, so I think it makes it very difficult because it is communication which is not out there (Participant 1).

You know, the internet is a big problem for us especially in terms of commercial crime, in terms of this counterfeit products including your pharmaceutical products. Anything that they want, they can order online, its delivered by Postnet or delivered by Mr Delivery or whatever the case is and this is really proving a huge problem for us and the way that we, the only way to trace these suspects or these persons who are supplying these fake products is through an IP address and the problem with the IP address that we are having now is that IP addresses are coming from other countries. For example, Uganda, Canada, Italy and uh, there is no possible way to trace these people to where they emanating from. They could be working from their garage, they could be working from a shopping center or mall and it's really proving, the internet is compounding the problem, tenfold (Participant 2).

It makes it harder to identify the suspect because you can never say for sure who is behind the computer. At the same time, you have incomplete or insufficient knowledge about the person. You have no idea where they are operating from or which network they are working off. It is just difficult to work with any crime that happens over the internet or with the help of the internet (Participant 5).

It doesn't prevent, all it does is make it a little more harder for us to get to the person so where you get these people who let's say advertise online and sell products online, it gives more work to the police to try and detect where the actual person is and where the storage of the goods are whereas in a shop or store, you know it's on the premises (Participant 12).

It makes it much more difficult for law enforcement, the criminals can hide behind the internet and they are often anonymous (Participant 20).

Well, it's very hard to detect via the internet because even if one traces your internet or your email IP address, they usually use internet cafes, they don't have fixed IP addresses so it's harder to trace them (Participant 21).

Basically, it's hard to try and trace somebody that's using internet and stuff, you know, people remain anonymous on these groups and on these chats, its people that you are not able to identify because obviously, you're not face to face with this person, you wouldn't have an identity so basically it's hard to detect who these people are (Participant 21).

From the responses above, the participants expressed that identifying and locating the suspect via the internet is one primary reason the internet prevents law enforcement from curbing counterfeit crime in South Africa. They stated that the internet provides anonymity to counterfeiters, allowing them to escape detection from law enforcement while actively continuing to trade their counterfeited products. The participants indicated that the use of the internet by counterfeiters makes it harder for them to trace suspects as their IP addresses are misleading or often hidden by virtual private networks (VPN's), or they make use of internet cafés to sell their counterfeit products online. They expressed that the internet allows counterfeiters to hide their identities, making it difficult to detect and apprehend them.

When the researcher asked the participants if the internet protects counterfeiters or makes them susceptible to easier detection, all participants stated that it protects counterfeiters from being detected. The participants expressed the following views:

> *Oh no, obviously, it makes it easier for them. It makes it much more easier for them because there are so many ways of ensuring that they, as I said, the main thing is that you don't know the identity of the person and the chances that you may get to a point where you may never know who the kingpins are. When we arrest, we will probably arrest a foot soldier but not a kingpin* (Participant 1)
>
> *It protects them. It is harder to trace the suspect if they are using the internet. It is also harder to identify them because they could be using false credentials and fake profiles, it's even worse when the fake profiles are being used at multiple café shops or internet rooms where it's near impossible to trace the person* (Participant 5).
>
> *It protects them, you don't know who is behind the screen, and all the details you see or think you know can be incorrect or fake. They are anonymous and untraceable when it comes to the internet, it can be anyone anywhere* (Participant 13).
>
> *I would say the internet, to an extent, it does protect them because the service providers are reluctant to give you the information like the IP address and all those things, they don't give you sometimes so it makes the task difficult for the police to go forward* (Participant 17).
>
> *It protects them because they can hide behind the internet and not all policeman have access to internet to patrol or watch them* (Participant 20).

The participants asserted that the internet protects criminal organisations when using the internet to commit counterfeit crimes. The participant's primary attribute is that the internet creates a challenge for law enforcement officers to identify and trace the counterfeiter on the internet. It was also stated that law enforcement does not always have access to patrol the internet. The participants conveyed that the internet protects criminal organisations by making them anonymous and untraceable.

When asked why criminal organisations resort to using the Internet to engage in counterfeit crime, several participants stated that it is a more manageable platform for criminal organisations to use for their counterfeiting trade because it become more challenging to detect and remain anonymous on the Internet. They are also able to reach a more significant number of users without having to expose their business, their identity or their location. The participants expressed that counterfeiters employ VPNs to create multiple layers of encryption between law enforcement and themselves. The participants shared the following views:

> *To avoid being detected. Yeah, avoid being detected, it's a faceless communication too which makes it almost impossible to detect* (Participant 1).
>
> *It's an easy way to operate. They remain anonymous, hard to trace, you don't know where they operating from and whatever the client or customer requests, can be delivered through Postnet, Mr Delivery or whatever it is and they still remain anonymous and that speaks for itself. Hard to trace them, hard to detect, hard to arrest them, hard to prove it was them in the first place* (Participant 2).
>
> *Because it's the safest way and the only way you can hide behind your criminal activity. I can use your details and pass it on like mine and if you go to trace that, you're going to get your details with my face. It's so easy to duck away from detection. And 90% of the criminals now are ducking behind the internet. They are ducking behind the internet because they know you won't be able to get a hold of them* (Participant 4).
>
> *I think it's easier for them. They create multiple barriers between themselves and law enforcement. They can also reach people easily, everyone is using the internet and all these apps for things that they need. It's also harder to detect communication between these criminal organisations if they are using the internet and VPN's to hide their location* (Participant 5).

Again, it's easy and everyone is able to access the internet. It's a platform that you can communicate with millions or thousands at a click of a button, you can hide behind pseudonyms and you can hide your details. You can sell the products easily online without law enforcement being able to track you. But remember, what we are seeing on the internet is on the open source internet, it's very limited compared to what's happening on the dark web, that's where all the big deals are happening (Participant 10).

As we stated, you can advertise on the internet as a, where you can hide your identity so you can conceal your identity whilst dealing with the internet and if you know a lot about the internet then you can completely conceal your identity and where you are dealing from so the internet does allow for concealment and anonymity where you can't necessarily identify them and it's a lot harder to trace them (Participant 12).

They can get to more people in a quicker time and at no cost, the detection and to arrest them is a lot harder and much less (Participant 15).

People are also becoming technologically advanced, right? In our days, we didn't have all this, it is harder to detect, there's no doubt about it, they feel that if they go online and scam somebody and go off the system, which is the fact, it's an ongoing thing and we have a lot of cases that go unsolved because of this and criminals take advantage of the internet because they know they not easily exposed (Participant 25).

Concerning the internet, the responses revealed that it is the perfect platform for counterfeiting criminal organisations because they become difficult to detect and trace due to layers of encryption. The participants expressed that the Internet protects counterfeiters as they can hide their identity and remain anonymous while actively trading counterfeit goods. The participants highlighted that criminal organisations use the internet to commit counterfeit crimes because it provides safety, anonymity and a vast platform to reach several potential customers with little to no exposure, thus restricting their chances of detection and apprehension.

5.7. Factors that contribute to the influx of counterfeit pharmaceutical products in South Africa

To gather data on the factors that lead to the influx of counterfeit pharmaceutical products in South Africa, the researcher asked the participants the following set of questions:

1. What are the main factors that cause counterfeit products to become easily accessible in South Africa?
2. In your opinion, do individuals resort to selling counterfeit pharmaceutical products because of certain strains or stressors in their lives?
3. Do you think that counterfeit crime occurs more because some individuals have greater opportunities than others in South Africa?
4. In South Africa, are individuals forced into selling counterfeits, or is it a decision that one makes of one's own accord?

When asked what they thought were the main factors that led to counterfeit products becoming easily accessible in South Africa, the participants provided a range of views. In receiving responses to this question, the researcher noted that several participants indicated that weak border control or the lack thereof combined with police corruption and the absence of customs officials in policing counterfeit products are some of the major causes for the influx of counterfeit pharmaceuticals in the country. The participants highlighted that affordability, unemployment and greed to make quick money are also factors causing an influx of counterfeit pharmaceuticals. The participant's views are as follows:

> *It's the, I think in the main, it's weak border control, corruption, police corruption, customs officials corruption plays a big role. Its profit, there is money in counterfeit, there is a lot of money in counterfeit goods but I think those are the main ones because there's money involved in it but also because we have weak border controls and also corruption plays a big role from officials. So, there's corruption, its weak border controls and also there is money to be made* (Participant 1).

> *Firstly, we look at our economic situation, people take advantage of that in the sense that people can't afford proper medication so they find a market, a niche, that can provide them to fill in that gap. So what they do is, they take advantage in the fact that because people can't afford things, we can give them a much cheaper alternative. Two, our borders are very porous so a lot of stuff comes through our porous borders and aside from the porous borders itself, we have many people, customs and excise people at the border itself where corruption is the number one factor that can assist the counterfeiters to make life easier in this country* (Participant 3).

> *Border control, no border control, I wouldn't say weak because weak means that there is somebody there but no border control means nobody is there* (Participant 4).

First thing is that these medicines are cheaper. They are accessible because they are cheaper to manufacture. I think insufficient policing of counterfeits is also a reason. It's also because there is weak police presence at our borders and not well trained members available to be posted there to detect counterfeits (Participant 5).

Number one is greed, its quick money to be made, economical factors as such, it's also organised crime that deals in the counterfeit, there's a lot of organised crimes involved in that where by sales of counterfeit, and it also makes it easier for them to generate income which in turn can fund terrorist organisations (Participant 10).

It's cheaper than the original, our borders are weak and we don't have enough customs/police officers at our borders (Participant 13).

The cost, it's cheaper and it's much more easily accessible because if you go into small towns, there's not always a Clicks or Dischem, there's always a Pakistani stop or a foreign shop and people would rather go to that shop because of the time period it takes to travel because the registered store got a set time in which the store is open. Especially in a rural area because a lot of these shops, your main shops are in the towns where a smaller shop is closer to home and is more accessible and it's more feasible to go to the smaller shops than the bigger registered shops (Participant 15).

The border control should be strict but there's so much corruption that also plays a big role (Participant 19).

The unemployment rate, obviously because there's such a high unemployment rate, people can make money easier through criminal activity, there's no border control and most of the people are below average in the country, they will obviously opt for the cheaper version of medication (Participant 21).

Poverty would be one, another one would be that no everybody is wealthy enough to afford medical aids and stuff so people will find it difficult to afford the original medications. Also, our border systems are not very strong hence we have these counterfeits flowing to and from cross borders (Participant 22).

The lack of proper border control, the lack of inspections by the various law enforcement agencies. South Africa has become a ground for all counterfeit goods due to its border not being managed properly (Participant 24).

When asked if individuals resort to selling counterfeit pharmaceutical products because of certain strains or stressors in their lives, some participants expressed that they did not think that personal strain or stress results in crime but rather that counterfeiters chose to commit this crime due to its lucrativeness:

> *No, I don't think so. No, not at all. They are driven by greed, there's money to be made and its organised crime, that's what it is. The main thing that they are motivated by is by money, by greed* (Participant 1).
>
> *No. It is purely for profit, it's a business, its a business* (Participant 3).
>
> *No, they resort to it for finance because they know they can make money off it* (Participant 9).
>
> *No because I've come across people selling counterfeit goods who are well off as well, financially. It's just greed for money in most cases* (Participant 10).
>
> *It's their greed for money. Honestly, if you're selling counterfeit, you're deceiving the end user and it's just there for you to make a quick buck out of it because you're paying less for the counterfeit products, you're not going to be paying the same amount that the original brand is demanding, you're just trying to undercut the main brand so you can make more money and if you can sell the product at a cheaper price than what the people can sell the normal brand, you're going to get the market* (Participant 12).
>
> *No no no, I won't say that. I would say, the primary cause of selling any counterfeit material is to make that extra buck, that's what they want to do, they want to make money. The guys come from Ethiopia, Senegal and all these places here, they want to turn money, that's what they want to do so they don't care what it is, as long as it's getting sold* (Participant 17).
>
> *No, it's just an easy way of making money* (Participant 19).
>
> *No, I think it's more relating to the fact that, for enrichment and for greed* (Participant 20).
>
> *There's no excuse for this, there's no excuse for selling counterfeit medication, there's absolutely no excuse for this, there should be no strain and stresses, this is just greed, people are motivated by greed. Nobody can tell me that selling counterfeit medicine to someone is people are stressed* (Participant 25).

Contrary to the participant's views above, some participants expressed that individual strain or stress can result in the individual committing a counterfeit crime, especially if it becomes a means of survival for them:

> *Yes, counterfeiting is easy money for those with employment issues. We know the employment situation here in South Africa so sometime, criminal activity is the easiest way to get income* (Participant 5).

> *Yeah some. Some, once they start, they see that this is a way I can live and they live like that* (Participant 7).

> *It's possible because they could be desperate for money and for employment. To many people, counterfeit may seem harmless so they might do it for the sake of getting some money especially those who can't find a job* (Participant 13).

> *Yes, it's easier to sell counterfeit than struggle to find a job. You get it cheap and sell it for more* (Participant 18).

> *Yes, poverty, unemployment* (Participant 21).

Participant 11 stated that although he was not sure whether it proved to be a result of individual strain or stress the act of counterfeiting is about surviving and doing so in an easier way:

> *I think it all boils down to poverty, nobody wants to have a difficult life, and everyone's looking for an easier way. I don't know if it's about stress or strain, I think it's basically a means to an end, it's a way of survival* (Participant 11).

Participant 22 gave the researcher a response favouring both explanations for this crime. The participant highlighted that some individuals commit counterfeit crime despite knowing that it is wrong and against the law but also acknowledged and expressed that the current rate of unemployment and the struggle to survive provide individuals with a way to earn an income and an easier way to earn a living:

> *For me personally, I'd say no because you're knowledgeable when you go into doing that kind of a thing, you know it's wrong, you know it's illegal, you know the consequences if you are caught. And then on the other hand, Yes, because people are struggling, people complain that government is not giving them enough hence they have to resort to all this underhanded stuff to earn a living or to make a living* (Participant 22).

When asked if counterfeit crime occurs because some individuals have greater opportunities than others in South Africa, some participants indicated that counterfeit crime may occur due to some individuals having more significant opportunities than others. The participants highlighted that the reasons for their views are the inability to obtain a tertiary education to secure steady employment and the necessity to survive with low employment opportunities in South Africa. The participants provided the following opinions:

> *Maybe. Some people can afford to do certain things that others can't, like go to university for example. By having such opportunities, you are opening the door to further opportunities such as good employment. Now those people who are basically unable to do anything because of their circumstances, they have to find other methods to survive and in a country like South Africa, crime is rife, it's the go to and with counterfeiting, it's not an aggressive or gruesome type of crime, it's a product that you sell and it ends there. So yes, the lack of opportunity to some people can very well push them into counterfeiting, even more so if there is demand for things* (Participant 5).

> *Yeah, highly possible. Counterfeit falls under fraud, people are qualified but they are not employed anywhere so now, how do they live? "Oh there is a way, we can do counterfeit"* (Participant 7).

Participant 13 expressed a differing view, stating that it can indeed be due to some individuals having greater opportunities than others, but went further to explain that it does not have to be about opportunity that makes individuals commit this crime:

> *It can go both ways. Yes because some people did not have the chance to go to school and stuff so they can't get a job, there is no other way to survive other than doing crime. But also, I can say no because there are plenty things you can do, like doing ironing or doing gardening or something to get money, you don't have to do crime. People do crime because they want quick money and a lot of it. Doing a proper thing to earn some money takes a lot of effort, some of these people don't want to do that* (Participant 13).

Some participants highlighted that it is not about opportunities or the lack thereof but rather the monetary benefits that counterfeit crime offers:

> *No, I think it's just people trying to make money of somebody else's brand. What is the purpose of a brand? A brand is to say quality and it demands a higher price so when*

you're counterfeiting something, you are trying to piggy back off somebody else's hard work and demand a similar price (Participant 12).

It's not about difference, it's more about what you are selling. If I'm selling this thing, I'm making money. They getting a luck to sell something and make money, they don't care who's better than who. It's all about the revenue, that's all. And counterfeit goods, revenue is there (Participant 17).

No, it's a crime, it's not about having opportunities, you can have opportunities, yes unemployment is quiet high, its everywhere in the world and counterfeit medicine, there's no excuse for it because you're playing with people's lives (Participant 25).

The researcher concluded this category of questions by asking the participants if individuals commit counterfeit crimes because they are forced or because it is a decision they take on their own accord. Fourteen (14) participants indicated that it is a decision that the individual makes on their own. The following are some of their views:

No, it's a decision for profit, definitely. Nobody is forced into anything. It's their own free will and the driving factor is the profit that they are going to make (Participant 2).

It's a decision that they make on their own account because as I say, it's all about the money. They don't care what happens to the people that take that medication, they are not interested, as long as they can make something of it (Participant 3).

Decision one makes on their own. You don't get up in the morning and say "today, maybe I should get up now, have my coffee and then go sell some counterfeit goods". You in this game and there must be a supplier coming to you, you must know when you're going to need stuff (Participant 4).

It's a decision they make on their own. It's your own choice (Participant 6).

They are not forced. They realise there is money to be made so they do. It is also because they know that some people may not know the original from the counterfeit, the take a chance and they are convincing so they make people buy it. I think it's their own decision because to them, they don't see it as a crime, they don't feel like they are hurting anybody (Participant 13).

No, it's a choice that they make, nobody is forcing anybody to sell counterfeit. They do it because of having a higher lifestyle and all of that, that's what they want and they

say they trying to help the people, that's the biggest thing they say, people's faces got buggered up with those face creams and stuff, it's very bad (Participant 17).

I believe it's a decision you make on your own, like I stated previously, you know the rights and the wrongs, you know the consequences if you're caught so definitely it's a decision that they make on their own (Participant 22).

The researcher did not receive any responses indicating that individuals were solely forced into counterfeit crimes. Instead, the participants expressed that while the individual made a decision, their circumstances drove them to engage in counterfeit pharmaceutical crime. The participants expressed the following views, highlighting contrasting viewpoints from those shared above:

It's hard to say. Yes, people are responsible for their own actions but they can also be forced into selling counterfeits depending on their circumstances in life (Participant 5).

I can answer it in two ways. Yes they are forced by the fact that they are not employed and they need money and as well, they can do it on their own when they decide that it's another way that you can live. Could be any way (Participant 7).

It's mostly a choice of their own but there is people that are forced because of poverty. If you've got no income whatsoever, people will do anything for money, even if it's a few hundred Rands and it's basically on any crime because even in a banking environment, there are people that open accounts and give your card out with a pin for a few hundred Rands and I think it's the same with pharmaceutical products (Participant 15).

As I said, the poor people would see it as a way of making money, I wouldn't say they are forced but they see it as a way to make money (Participant 20).

No, it's their own decision but they could be forced as a way to survive, survival, yeah, it just depends on the circumstance (Participant 21).

In relation to the factors contributing to the influx of counterfeit pharmaceutical products in South Africa, the responses indicate that weak border control, police corruption and the lack of customs officers at the relevant checkpoints are among some of the reasons for the influx of counterfeit pharmaceuticals in the country. The participants indicated that some individuals do not commit counterfeit crimes because of strain or stress but for their monetary gain.

Participants also expressed that stress or strain can cause an individual to commit counterfeit crimes, especially if they are seeking to earn an income to survive. While having opportunities that others may not have, such as a tertiary education, does not mean that individuals commit counterfeit crimes, the participants indicated that a lack of opportunity to secure proper employment in a struggling economy can motivate individuals towards counterfeit crime to make a living. The majority of the participants expressed that it is an individual's own decision to commit the counterfeit crime, but some highlighted that while they may not be forced, their daily circumstances and struggles may cause them to engage in counterfeit crimes for financial gain and survival.

5.8. Public health interventions that South Africa has in place to protect its citizens against counterfeit crime.

To gather the relevant data on the public health interventions that South Africa has in place to protect its citizens against counterfeit crime, the researcher asked the participants the following questions:

1. Do you think there is enough awareness surrounding counterfeit crime in South Africa?
2. Do you think that South African citizens are aware of counterfeit pharmaceutical products?
3. In your opinion, how are South Africans protected against counterfeit pharmaceutical products?
4. Are you aware of any public health interventions that protect South African citizens against counterfeit pharmaceutical products?

When asked if they thought that there is enough awareness surrounding counterfeit crime in South Africa, some participants expressed that they felt that there was enough awareness currently:

> *There is enough awareness at this stage but however, I feel that there should be more awareness especially dealing with counterfeit pharmaceuticals. It's a dangerous practice and I feel that pharmacies themselves or even pharmaceutical companies should actually have often awareness campaigns where they make people aware of what's happening in the country itself because you can't leave that specifically onto the law enforcement agencies like your customs and excise or your police because we got other matters* (Participant 3).

I think there is enough awareness, I think everybody knows what's going on but nobody actually cares about it (Participant 11).

However, it must be noted that most participants answered "No, not at all" and felt there was not enough awareness surrounding counterfeit crime in South Africa. The researcher wishes to share two participants' views to highlight that the common individual in the rural parts of the country and the city may not be aware of counterfeit crime:

No because I only know about counterfeit because I am a police official. I come across it in different ways but otherwise, people don't know about that (Participant 7).

No, I don't think so. Through your radios and TV's, they need to put more awareness out and campaigns and stuff in the rural areas where most of your people buy counterfeit goods because of poverty and it's cheaper (Participant 15).

When asked if they think South African citizens are aware of counterfeit pharmaceutical products, the majority of participants answered "No", stating that they did not think there was enough awareness surrounding counterfeit pharmaceuticals. However, some participants provided differing yet stimulating responses:

Participant 3 indicated that people are aware, but they are naïve in thinking that the pharmaceutical product is legitimate or a stolen original:

Some people are aware but there are many people out there that are naïve. They don't really know that this stuff is counterfeit. They assume that this stuff is maybe stolen or brought from another pharmacy or you know, it's actually stolen stuff they buying but they not buying the original stuff, they are buying harmful products that create a lot of damage to their bodies (Participant 3).

Participant 5 highlighted that individuals from rural areas may not be aware of counterfeit pharmaceuticals existing because they trust their local health providers to offer them legitimate medication that is safe:

Yes but also it depends if they are from a rural or urban environment as well. Some people for the rural areas may not be aware that counterfeit medicines exist, they trust their local health care providers (Participant 5).

Participant 6 indicated that individuals are aware that counterfeit pharmaceuticals exist but that they don't know how to identify these products against the original:

> *They are aware but they don't know how to identify them, they cannot differentiate between an original and a fake. Even when I am at the pharmacy sometimes, they will say they don't have original, they have generic but because it's a pharmacy, we trust them but elsewhere, I won't be able to identify* (Participant 6).

Participant 8 indicated that disadvantaged individuals who struggle financially to ascertain medicine may not know if a product is counterfeit:

> *Maybe some of them, maybe the advanced people in South Africa but I'm sure that the underprivileged and people who can't afford the normal medication and stuff, they wouldn't know* (Participant 8).

Participant 12 indicated that individuals are not aware of counterfeit pharmaceutical products and that instead of identifying their inferiority and harm, they assume they are purchasing a product that has come from a source such as a truck carrying bulk pharmaceuticals:

> *No, I actually don't think there is enough awareness, I don't think people are fully aware of, and especially in terms of pharmaceuticals, I don't think a lot of people are aware of what they need to look at when they purchasing products and I think a lot of people are unaware. They think they are buying something that has fell off the back of a truck but not aware that they are buying something that is totally inferior and not of the same quality and can't necessarily deliver the relief that it's supposed to give* (Participant 12).

Participant 17 expressed that individuals are aware of counterfeit pharmaceuticals but that they purchase them regardless of it being counterfeit as it is more affordable in comparison to purchasing them from a pharmacy:

> *They are, they are aware of it and some of them look for the easy way, the cheap way, they think it's going to help but it's not going to help them* (Participant 17).

When the researcher asked the participants how South Africans are protected against counterfeit pharmaceutical products, they provided the following views:

> *Okay, the law, the law is there, the law is written in respect of this is what you need to do and the reporting and all of these things here. Yeah, I mean the laws are there and the Acts are there, it's there to protect them. The courts are there to protect them* (Participant 4).

We have legislation in place but it comes down to enforcing that legislation in place (Participant 10).

I think they are protected in terms of where the Counterfeit Goods Act comes in and by the actual brand themselves (Participant 12).

They are protected by the law and the Acts that are in place but I think that the Department of Health should also be doing something to help people educate themselves (Participant 13).

By legislation, by the brand awareness as well (Participant 20).

There is laws and legislature surrounding that but other than that, if you not knowledgeable of those laws then you not protected (Participant 22).

Okay we have our legislations in place, we have the law in place, we have the Counterfeit Act in place so if people are aware of or they suspect for that matter, there are outlets and you don't have to identify yourself to give information to the police. If you find a back yard lab that's going on and you feel there's chemicals there, you can make an anonymous call to the South African Police, we got toll free lines, we got crime stop.

There are a lot of avenues open to the general public to lodge a complaint to the police and let us know and it is the responsibility of the police to go out there and check it out or to get the experts out there to investigate and see what's going on or to open enquiries to see if this is really counterfeit products that are being manufactured (Participant 25).

The majority of participants expressed that South Africans are protected from counterfeit pharmaceutical products through the existence of relevant legislation surrounding counterfeit crime. They highlighted that the Counterfeit Goods Act 37 of 1997 and supporting legislature prescribes what is required to file a report of counterfeit pharmaceuticals so that law enforcement may act accordingly to ensure that citizens do not purchase counterfeit pharmaceutical products. However, Participant 10 stated that while the law protects society from the dangers of counterfeit pharmaceutical products, properly enforcing such legislation is just as essential.

When the researcher asked the participants if they knew of any public health interventions to protect South African citizens against counterfeit pharmaceutical products, several participants (twenty-two) responded "*No*" to this question. Almost all the participants were unaware of any public health interventions despite their varying years of service in law enforcement. However, three participants stated differently, mentioning the public health intervention that they were aware of:

Participant 6 expressed that the South African Health Products Regulatory Authority (SAHPRA) is a current public health intervention that protects citizens from counterfeit pharmaceutical products:

> *It's SAHPRA, yes* (Participant 6).

Participant 12 stated in his response that the Medicines and Related Substances Act 101 of 1965, together with the Medicines Control Council, once played a vital role in investigating claims of counterfeit pharmaceuticals and eradicating them from the streets, but their current presence and activeness remains unknown:

> *Look, the Medicine Control Council, they do inspections so they would go to pharmacies and they got the right to go into a pharmacy, I think, without a warrant and do an inspection in terms of the Medicines and Substances Related Control Act.*
>
> *I remember when we worked with organised crime, we had a guy who worked in Durban with the Medicine Control Council and he came to us on numerous occasions with complainants and to assist with obtaining warrants and doing inspections and seizures of counterfeit medicines, illicit medicines and pharmaceuticals. So the Medicine Control Council was active then, I don't know how active they are now* (Participant 12).

Participant 25 indicated that the Department of Health, together with the laws in place acts as a preemptive and multidisciplinary avenue for law enforcement to protect citizens from the harms of counterfeit pharmaceutical products:

> *I think under the Department of Health, there should be policies in place but I think even the law, the Counterfeit Act covers part of this so it's incorporated in the Act because we won't charge you, it's a preventable way, you understand, if its public health intervention, they are binded by the law as well. I'm not sure how the Department of Health works but I do know that we have meetings with the different role players*

> *from the different departments and one of them is the Department of Health and investigations of counterfeit products are also discussed there, and methods of prevention and how we as law enforcers can assist them in regards to their work, I mean, their suspects of whatever they feel could be a hindrance to the health. You know when we do interventions, if we are doing a raid on say for instance a lab, we will definitely get the Department of Health there so it's a preventative method already so the interaction between the different role players and the different departments is a health intervention for the public if you look at it holistically* (Participant 25).

In relation to public health interventions, the majority of the participants expressed that there is not enough awareness surrounding counterfeit crime in South Africa. It included that awareness relating specifically to counterfeit pharmaceutical crime is similarly limited. Whilst the majority of participants stated that there was not enough awareness of counterfeit crime or counterfeit pharmaceutical crime, a few participants did state that there is some awareness of counterfeit pharmaceutical products, but factors such as being unable to afford the original product, the inability to identify between the original and fake product, trust in rural health care providers and assuming that a product sold outside its usual environment (in this case, a pharmacy), is stolen but original encourages people into purchasing or using counterfeit pharmaceutical products.

The participants stated that South Africa's legislation protects people from the dangers of using counterfeit pharmaceuticals. Twenty-two out of the twenty-five participants in this study said that they are unaware of any current public health interventions to protect citizens from counterfeit pharmaceutical products. Three participants separately highlighted that SAHPRA, the Medicines Control Council, the Medicine and Related Substances Act 101 of 1965, and the Department of Health are in place to provide interventions to assist South Africans against the vulnerabilities of counterfeit pharmaceutical products.

5.9. Conclusion

In this chapter, the researcher presented and analysed the data collected from police officers working with counterfeit crime in two separate units within the SAPS (Commercial Crime Branch and the Hawks). The researcher collected data from the officers using semi-structured interviews and an interview schedule containing predetermined questions relating to the study's research objectives. The researcher thematically analysed the data collected from the police officers. This chapter presented rich data which emanated from the participants. The researcher

used verbatim quotes when presenting the study's findings to express the participants' views, opinions and thoughts. In the following chapter, the researcher will discuss the study's findings.

CHAPTER 6: DISCUSSION OF FINDINGS

6.1. Introduction

In the preceding chapter, the researcher presented and analysed the data collected from the study sample. Consequently, this chapter discusses the study's findings in relation to the objectives of the study together with the conceptual framework from which they originated. This chapter also seeks to present the achievement of the study's objectives and to answer the research questions stipulated in Chapter One. The discussion of findings will comprise the literature and theories underpinning the study. This study focused on the criminological examination of counterfeit pharmaceutical products in South Africa. The researcher proposes six objectives for this study, and they are listed as follows: to determine the extent of counterfeit pharmaceutical products existing in South Africa; to examine how Police Officials are trained to detect counterfeit pharmaceutical products; to investigate the efficacy of the legislature that South Africa has in place to deal with counterfeit crime; to investigate how the internet facilitates criminal organisations that deal in counterfeit pharmaceutical products; to determine the factors that contribute to the influx of counterfeit pharmaceutical products in South Africa; and to explore the public health interventions that South Africa has in place to protect citizens against counterfeit pharmaceutical products. The attainment of these objectives will be discussed below.

In the following section, the researcher presents an interpretation and discussion of the data collected from the interviews conducted with the participants. Mouton (2011) states that interpretation refers to relating the researcher's results and findings to existing literature and research studies and demonstrating whether these are supported or contradicted by the interpretation. The following is the discussion of findings according to the objectives of the study.

6.2. The extent of counterfeit pharmaceutical products existing in South Africa.

The first objective of this study was to determine the extent of counterfeit pharmaceutical products in South Africa. The researcher wanted to find out how these products came into the country and whether the COVID-19 pandemic created a niche for counterfeiters to create counterfeit pharmaceuticals.

The researcher wanted to understand how the pandemic motivated counterfeiters and whether counterfeit pharmaceutical products exist due to opportunistic events such as the pandemic and public demand. The following discussion relates to the findings regarding the abovementioned objective.

Ziavrou *et al*. (2022) explain that some of the main reasons for the prevalence of counterfeit pharmaceutical products are high demand for less expensive drugs, lack of law enforcement in crucial entry points, weak national regulatory policies and methods; digital marketplaces and poorly trained customs and police officials. The participants were asked how they thought counterfeit pharmaceutical products came to exist in our society and South Africa. The study revealed that 15 out of 25 participants, 66% of the study sample, believe that counterfeit pharmaceutical products come into South Africa via its borders. In addition, the study found that the lack of law enforcement at borders resulting in porous borders creates easy access for counterfeiters to transport counterfeit pharmaceuticals through South Africa's borders. The researcher believes counterfeit pharmaceutical products are prevalent because officers at the borders are inadequately equipped to render more substantial border control.

Further economic circumstances perpetuate the issue more, as supplementary resources and manpower may not always be available to strengthen existing border control. The majority (66%) of participants expressed weak borders as the reason for counterfeit pharmaceutical product prevalence while only 34% had differing views. They reported that counterfeit pharmaceutical products exist in our society as they are more affordable than the original products purchased from a legitimate pharmacy. The researcher believes that counterfeiters are aware of this current predicament and exploit this circumstance to benefit effortlessly from the monetary gain attached. The study conducted by Ziavrou *et al.* (2022) confirms this by stating that high demand for cheaper pharmaceutical products is among the many reasons for the high prevalence of counterfeit pharmaceutical products. The study revealed that porous borders coupled with the opportunity for speedy financial gain and affordable pharmaceuticals are how counterfeit pharmaceutical products come to exist in South Africa.

The study found that 66% of the study sample (15 out of the 25 participants) believed that individuals were afraid of getting sick during the COVID-19 pandemic and that this fear influenced the demand for counterfeit pharmaceutical products, especially in underprivileged communities.

The researcher is of the view that the widespread fear and panic from the onset of the pandemic and the uncertainty of life that came along with it resulted in a greater demand for pharmaceutical products and that the inability of specific communities to afford authentic pharmaceutical products created a niche for counterfeiters to satisfy that demand. The study revealed that the counterfeit alternatives were accepted by many individuals, especially during the lockdown period of the pandemic, since access to certain pharmaceutical products was limited and people could not leave their homes. The study revealed that individuals did not want to risk being infected and possibly infecting their family, so they utilised any pharmaceutical product available, regardless of whether it was counterfeit or not, to prevent themselves or their loved ones from the pandemic (Fontaine, 2019). Individuals felt obliged to possess some medical products during the onset of the pandemic, even if taking the counterfeit version did not affect treating the ailment. The researcher is of the view that the fear of contracting the illness and the high possibility of dying outweighed the authenticity of the product, thus allowing the demand for counterfeit pharmaceutical products to rise during the onset of COVID-19.

The researcher wanted to determine how the demand for counterfeit pharmaceutical products during the COVID-19 pandemic motivated counterfeiters. The study found that counterfeiters are motivated by the financial benefits of supplying counterfeit pharmaceutical products to individuals who are afraid of getting sick and cannot afford original medicines from a legitimate retailer. The participants reported that counterfeiters preyed on the fear and desperation of communities by offering them a way to protect themselves by using their counterfeited pharmaceutical products. The study revealed that the COVID-19 pandemic resulted in widespread fear amongst all communities in South Africa and worldwide. The uncertainty of surviving the pandemic should you contract the illness allowed counterfeiters to persuade people to purchase counterfeit pharmaceutical products to safeguard themselves and their families.

To achieve this objective, the researcher wanted to find out whether counterfeit pharmaceutical products exist due to opportunistic events, such as the COVID-19 pandemic and public demand. Most of the study's participants expressed that counterfeit pharmaceutical products do exist due to opportunity. The study found that 17 out of 25 participants, a majority of 68% of participants, expressed that events or situations, such as an outbreak like COVID-19, place strain on impoverished people.

Their knowledge of counterfeit pharmaceuticals influences these individuals into purchasing these items irrespective of whether they would actually heal them. The presence of a circumstance, like the pandemic, that results in a sudden increase in the need for a product creates a greater demand than usual. Additionally, the participants indicated that while the pandemic exacerbated the existence of counterfeit pharmaceutical products, public demand for specific counterfeited pharmaceuticals existed before COVID-19. The notion of *supply and demand,* as stated in the study conducted by Sammons and Choonara (2017), confirms and highlights that should the demand exist, counterfeiters will, in some manner, produce and occupy the niche created by societal demand.

6.3. The training of police officers to detect counterfeit pharmaceutical products.

This objective was achieved. The researcher wanted to determine what training is provided to police officers to equip them to detect counterfeit pharmaceutical products. The researcher aimed to learn how often training took place and what the duration of such training was. Additionally, the researcher sought to identify if there are any prerequisites to be trained as an officer to detect counterfeit pharmaceutical products. Finally, the researcher wanted to determine when the last training program occurred and whether police officers received follow-up training to be up-to-date with current and modern detection techniques. The following is the discussion relating to the above objective.

The participants were asked what training was provided to equip them to detect counterfeit pharmaceutical products. The majority of participants, 60% of the study sample, stated that they had received some training (either formal or informal or both). The participants expressed that formal training occurred in workshops, seminars and conferences. In contrast, informal training included gaining knowledge from other officers and from the cases they have worked on or are currently working on. The study revealed that training is not always provided by SAPS but also by the patent attorneys or brand ambassadors. The participants indicated that this form of contact training often provides them with the materials to accurately identify counterfeited versions of a product that has been recently modified or imitated. The participants expressed that brand ambassadors and patent attorneys may not regularly provide training to all counterfeit crime officers, but they maintain training for senior officers tasked with relaying the information learned.

The participants highlighted that in some instances (as with the case of informal training) that, their training is ongoing and that they continue to gain knowledge through their progress and

experiences in the field as well as from their fellow officers. The participants indicated that, in some instances, informal training exposes them to a broader range of counterfeit cases, some of which they were investigating for the first time. Kleygrewe *et al.* (2022) affirm that the complexities experienced in policing counterfeit pharmaceuticals sometimes precede the educational components taught in formal training sessions. In contrast, 36% of the participants reported not receiving training, and 4% revealed that they were unaware that training was available. By asking this question, the researcher was able to learn that police officers do receive training to equip themselves better when dealing with counterfeit pharmaceuticals, but also that training in the field itself is not limited in scope to a particular officer, situation or case. The researcher wishes to highlight that despite answering this question, the officers did not provide precise insight into the specifics of their training. The researcher believes that this is to protect and conceal the techniques taught to police officers during their training to detect counterfeit pharmaceuticals (Kabiri *et al.,* 2023).

The participants were asked about the duration of their training and how often it took place. The majority of participants, 60%, who stated that they received training provided varying responses. The study discovered that the duration of formal training largely depends on what type of training is provided to the officers. The participants expressed that training could occur for one day, three days or an entire week. They further explained that courses provided by SAPS or a related provider (such as the brand ambassador) generally lasted an entire week, while seminars and conferences provided by patent attorneys or related brand experts ranged from one to three days.

When asked how often training took place, counterfeit training as well as some general training on current prevalent issues, 44% of the participants indicated that training does not take place often; 20% indicated that training occurs on a *needs-only* basis; 16% stated that training is ongoing in the field (informal) and eight per cent indicated that they received training every three-four months. When asked this particular question, 12% of the participants expressed that they did not receive any training (counterfeit or general) other than the training received at the police academy. This question seeks to depict the frequency and duration of essential counterfeit crime training, especially with counterfeit pharmaceutical products, as trends in this type may change faster than other types of crime (Roberts and Gordon, 2016).

The researcher asked these questions to determine whether sufficient training courses were being provided to police officers and how often they took place to ensure they were adequately

updated and equipped to detect and police counterfeit pharmaceutical products. The researcher learnt through the participants that limited funds and resources at the governmental level largely contribute to how often and what training is provided to them.

The police officers were asked if there were any prerequisites required to be trained to detect counterfeit pharmaceutical products. The study revealed that the majority, 60% of participants, stated that there are no pre-requisites to be trained to detect counterfeit pharmaceuticals; 28% of the study sample noted that an officer has to possess a certain rank (such as detective, warrant officer or sergeant) to be eligible for counterfeit crime training. The remaining 12% of participants indicated there are prerequisites, but they are uncertain about what they are. The thinking behind asking this question was to determine whether counterfeit officers form part of a specialised unit or whether any police officer with knowledge and experience in counterfeit crime would be eligible to join the unit. The researcher believes that a specific crime such as counterfeit pharmaceutical crime requires a certain level of expertise that young recruits may not necessarily be equipped with once they complete their academy training (Gancheva, 2016). With the majority of the participants indicating that there are no pre-requisites to be trained as an officer to detect counterfeit pharmaceuticals, the researcher shares a similar view with Thenga (2018), who states that without adequate exposure and training, police officers with little knowledge and experience may experience great difficulty policing counterfeit pharmaceutical crime.

The researcher asked the participants when the last training program took place. The majority of 44% of participants stated that they last received training before COVID-19; 24% said that they last received training in 2022, and 24% were unsure of when the last training program occurred. Kleygrewe *et al.* (2022) suggest that regular police training is crucial as it equips law enforcement officers with the necessary skills and tools to resolve any on-duty demands placed upon them effectively. Furthermore, Salem (2019) explains that continuous police training prepares officers with the essential skills to manage any social, operational or procedural changes that may affect them. The researcher believes that the scarcity of police training after the onset of COVID-19 led to many officers lacking the knowledge and skills to accurately police counterfeit pharmaceutical products that emerged during the onset of the pandemic, thus leading to its prominence in the country.

This study finds that the majority 48% of participants stated that police officers do not receive follow-up training; 44% indicated that they did receive follow-up training but would not

disclose the nature of this training, while 8% stated that follow-up training was limited and that not all officers welcome the opportunity to attend. Of the 44% of participants who stated that they did receive follow-up training, 20% said that the follow-up training was informal, meaning that it was on-the-job training through their various experiences and cases in the field. Consequently, this translates to less than a quarter of the study sample, precisely 24% of the participants, indicating that they received formal follow-up training. The researcher asked this question to identify if police officers receive further training commensurate with the latest crime trends in the counterfeit crime category in South Africa. In conclusion, police officers may receive basic and necessary training on counterfeit crime, but specialised training focusing on the specification and modification of counterfeit pharmaceutical products may be severely limited in South Africa (Salem, 2019).

6.4. South African legislature surrounding a counterfeit crime

The researcher endeavoured to examine the legislature South Africa established to address counterfeit crime in South Africa. The researcher sought to determine whether the existing legislature is sufficient to curb counterfeit crime, whether the existing legislature is capable of responding to the advancements in counterfeit crime over time, what the pitfalls of the current legislation are, and whether the existing legislature is limited. To gain the necessary data to achieve this objective, the researcher posed four questions to the participants regarding the legislation that South Africa has in place to deal with counterfeit crime. The discussion below relates to the abovementioned objective. Firstly, the participants were asked whether they consider the current Counterfeit Goods Act 37 of 1997 sufficient to combat counterfeit crime in South Africa.

The study's findings revealed that the majority of 44% of participants indicated that they find the Act to be sufficient; 20% stated that the Act is adequate but that it requires some adjustment or improvement; 32% of the participants expressed that the Act is not sufficient and 4% stated that they did not work with the Act as extensively enough to answer this question. The current study's findings align with the findings noted by Thenga (2018), who found that the Counterfeit Goods Act 37 of 1997 is the sole Act that criminalises counterfeit crime in South Africa, hence making it the single5 Act that law enforcement relies on concerning counterfeit matters.

Burger (2015) further sustains that while the Act is sufficient in curbing counterfeit crime, it does require a degree of amendment to account for emerging and specific forms of counterfeit crime, such as counterfeit pharmaceutical crime, whereby the effects of such a crime could

result in fatality. This is further confirmed in an article written by Jones (2019), whereby the author highlights that policing counterfeit pharmaceuticals is a fairly recent endeavour for law enforcement and that the fine print associated with pharmaceuticals within the Act makes this form of counterfeit crime a challenging category to police officials. The researcher contends that with law enforcement having one primary Act to police counterfeit crime, their knowledge, experience and expertise gathered due to not having an alternate Act to refer to has permitted this single remnant of legislation to be deemed sufficient.

The researcher asked the participants what it meant to law enforcement that counterfeiters have advanced since the last amendment to the Counterfeit Goods Act 37 in 2001. The study finds that 50% of participants stated that law enforcement also has to upgrade with advancements in crime if they are going to police it effectively, and 35% of the participants expressed that it meant that law enforcement was behind criminals. The current study found that law enforcement has experienced difficulty making arrests for counterfeit pharmaceutical crime as the Act has not been amended to accommodate this category of counterfeit crime (Jones, 2019).

In addition, the study revealed that it is difficult to enforce legislation that has not been amended to incorporate the specific legal process for emerging and prevalent crimes such as counterfeit pharmaceutical crime. Contrary to the findings above, the study found that 15% of the participants expressed that the Act remains sufficient regardless of an amendment. The participants indicated that despite the last amendment to the Act being in 2001, the Act is prescriptive and provides a straightforward guide on how to approach counterfeit crime. The participants stated that with proper knowledge of the Act in its entirety, it applies to all forms of counterfeit crime. The reasoning behind this question was to determine whether the Counterfeit Goods Act 37 of 1997 can be applied to all categories of counterfeit crime and to determine if a counterfeit pharmaceutical crime is prevalent due to a law that has not been amended in several years. The researcher was able to satisfy the above reasoning through the study's findings, which revealed that while the prevalence of counterfeit pharmaceutical crime does exist, it is not due solely to the Act not being amended (as discussed earlier under objective 1).

Simultaneously, the study finds that the Act does warrant an adjustment to provide clarity to officers, considering that the prevalence of counterfeit pharmaceuticals soared at the onset of COVID-19.

The researcher continued by asking the participants what the pitfalls of the Counterfeit Goods Act 37 of 1997 make it easier for counterfeiters to escape punishment. The majority (65%) of participants revealed that one of the major pitfalls of the Act is its leniency. The study found that while the Act effectively apprehends counterfeiters, it is not stringent enough to punish them. The participants stated that incarceration for counterfeit crimes is rare since most counterfeiters receive a fine and are released upon payment. The study finds that counterfeiting is not perceived as a priority crime and is only considered serious in the event of a severe injury or fatality. A study conducted by Cai (2020) explains that counterfeit items such as counterfeit clothing, shoes or handbags do not appear to be harmful; however, counterfeit items such as counterfeit pharmaceuticals that are ingested can be fatal to the end user. The researcher opines that it is only under such extreme cases that the court will contemplate incarceration for the accused counterfeiter (Kabiri *et al.*, 2023). In addition to the findings above, this study finds that 20% of the participants indicate that a pitfall of the Act is that it does not address the apprehension of the kingpins of the counterfeiting organisations.

The participants highlighted that the low-ranking individuals involved with counterfeits are primarily apprehended. With the kingpins still in charge of the organisation, such individuals are easily replaced to allow the business to continue. Thenga (2018) concurs by stating that most efforts to mitigate counterfeit pharmaceutical products are directed towards arresting the sellers on the streets and not the primary source led by the syndicate's kingpins. Further to the above findings, the study revealed that 15% of the participants expressed that with the absence of the brand ambassador being a complainant, there is no case to open. The participants revealed that law enforcement officers cannot be the complainant in a counterfeit matter. They stated that should the brand ambassador not file a complaint against the counterfeiter, the matter will not proceed further, allowing the accused to be released along with the counterfeit items that were confiscated (Maguire & Ramara, 2018).

Lastly, the researcher asked the participants how the legislature surrounding counterfeit crime is limited in South Africa. The study revealed that the majority of participants, 45%, indicated that one specific limitation of the Act is its leniency and extensive loopholes.

The participants disclosed that the Act is somewhat lenient by predominantly issuing fines instead of incarceration, which allows criminals to escape the harsher punishment that should be given to them, especially for products that threaten human life. They revealed that counterfeiters know that counterfeit pharmaceutical crime is not an offence that receives

massive police attention (Thenga, 2018). They expressed that with the various restrictions on documentation and rigid time frames stipulated within the Act, counterfeiters rarely receive severe punishment for counterfeit crimes. McCain (2021) asserts the findings above by expressing that many criminals make a decision to commit a crime based on the punishment that the crime warrants. The author further attests to the current study's findings by highlighting that criminals may commit a crime if they know their chances of detection and apprehension are low. In addition, 20% of the study population revealed that the time frame for submitting certain official documents (such as the brand owner's affidavit) set out within the Act is a limitation. The participants shared that there is limited time to submit certain documentation to open a case that can be taken to court successfully. The participants disclosed that should such documents not be acquired by the specific time stated in the Act, the counterfeiter is released, and the confiscated goods are returned (Jones, 2019). The participants expressed that counterfeiters are often aware of this limitation.

Furthermore, Maguire and Ramara (2018) arrived at a similar explanation as the current study by indicating that the combination of the limited time frame set out for documentation coupled with law enforcement's inability to act as the complainant in counterfeit matters, counterfeiters take advantage of this fact and exploit this loophole knowing that the likelihood of their incarceration is slim. The participants disclosed that this limitation often makes them feel defeated since they cannot proceed any further without a formal complaint, leaving them frustrated and despondent in policing counterfeit products. The researcher opines that most counterfeiters mimic international and prestigious brands to create a dilemma for law enforcement to obtain a complaint, as many global brand ambassadors are challenging to reach quickly (Thenga, 2018). Possessing this knowledge and understanding how to operate the Act may be considered a limitation, thus making it easier for counterfeiters to escape their punishment.

6.5. The use of the Internet to facilitate criminal organisations dealing in counterfeit pharmaceutical products.

The researcher aimed to investigate how criminal organisations utilise the internet to facilitate their counterfeiting enterprise. In achieving this objective, the researcher endeavoured to determine how the internet makes it difficult for law enforcement to police counterfeit pharmaceutical crime in South Africa and to establish whether the internet protects criminal organisations or makes them susceptible to easier detection when using the internet to commit

counterfeit crime and lastly, to uncover why criminal organisations resort to using the internet to engage in counterfeit crime. The discussion below pertains to the findings of the study in relation to the abovementioned objective.

The researcher asked the participants how the internet prevents law enforcement from curbing counterfeit crime in South Africa. The majority of 85% of the participants expressed that counterfeiters that utilise the internet are much more difficult to trace as they remain anonymous on the internet due to fake IP addresses and usernames. In comparison, 15% of the participants stated that law enforcement faces difficulty in curbing counterfeit crime as a result of online counterfeiters being technologically advanced and resourced. The participants shared that the use of virtual private networks (VPN's) permits such criminals with the ability to conduct a faceless and undetectable enterprise. They continue that VPN's allow counterfeiters to hide all details about themselves by being protected behind layers of encryption (Acri & Lybecker, 2018). Furthermore, the participants added that unlike counterfeiting on the streets, law enforcement officers cannot police the internet as they do not have the manpower or the resources to do so, particularly in developing worlds like South Africa. Fincham (2021) adds to the current study by stating that criminal networks thrive on the dark web as it is the part of the internet that is not visible and available on a regular search engine. The author concurs with the current study's findings by stating that counterfeiters become more complex to locate as the dark web hides their IP address and their real credentials as they progressively get deeper into the dark web. The study revealed that online counterfeiters are more complicated to detect, not only due to their anonymity but also because of their advancement over the years. Weimann (2016) confirms this finding by highlighting that counterfeiters have advanced to creating online pharmacy platforms that do not raise suspicion but permit their organisation to proceed with selling counterfeit pharmaceutical products. The author further confirms that most online pharmacies have IP addresses that continuously bounce off various locations, making it more difficult for law enforcement to trace the site (Weimann, 2016). The participants expressed that such organisations thrive in countries like South Africa, where cybercrime units are elusive and patrolling suspicious internet activities is scarce.

When asked if the internet protects criminal organisations or makes them susceptible to easier detection when using it to commit counterfeit crimes, 80% of the participants stated that the internet protects criminal organisations. They revealed that the internet makes it difficult for law enforcement to trace criminals as a result of the encryption and anonymity provided to criminals through the use of VPN's and the dark web. Some of the participants stated that it is

challenging to trace criminals on the internet as they employ false credentials and fake profiles with false user details. They added that it is difficult to find the exact location where they are operating since they work behind a VPN. Gehl (2021) confirms this finding by explaining that with the use of VPN's, criminals can hide their actual location and IP address while bouncing off various servers to advertise and sell their counterfeited products online. The current study finds that the internet protects criminal organisations by giving them the advantage of being untraceable and anonymous to conduct untraceable transactions using an encrypted browser. In addition to the findings above, 15% of the participants indicated that the internet does not protect criminal organisations but creates greater difficulty for law enforcement to detect counterfeiters who are using the internet to trade in counterfeit pharmaceutical products. These participants felt that the internet makes it challenging to detect and apprehend criminals and that there are, in fact, special units in place to monitor online activity. Ramsay (2015) asserts a similar finding and explains that online counterfeiters are significantly more challenging to detect but that finding them is possible given the proper resources and skilled personnel.

The researcher asked the participants why criminal organisations use the internet to engage in counterfeit crimes. The majority, 77% of participants, expressed that criminal organisations use the internet to commit counterfeit crimes because they can avoid detection and conceal their identity with the advantage of reaching more people on various platforms on the internet. The participants revealed that it is much more difficult to trace and detect criminals who employ the internet as the medium for their operations. Some participants stated that with the internet, it is more challenging to prove guilt in court since their digital footprint can be easily erased or adjusted through the use of VPN's and the dark web, making it easier to escape punishment. The current study finds that criminal organisations use the internet to create a presence on a variety of commonly used platforms in several global areas while avoiding detection through the use of several layers of encryption that VPN's allow for. In addition, this study finds that 24% of participants stated that criminal organisations utilise the internet because it is easier to facilitate illegal transactions since there are more platforms, such as Facebook and Telegram, to sell counterfeit products. These participants highlighted that online deals between the counterfeiter and end user are more straightforward to facilitate as there is no public observation and police presence to trace their virtual deals (Fincham, 2021).

6.6. Factors contributing to the influx of counterfeit pharmaceutical products in South Africa.

This research objective was well achieved. The researcher sought to determine the factors contributing to the influx of counterfeit pharmaceutical products in South Africa. To achieve this objective, the researcher endeavored to determine the main factors that cause counterfeit pharmaceuticals to become easily accessible in South Africa, to ascertain if individuals resort to selling counterfeit pharmaceutical products because of certain strains or stressors in their lives, whether counterfeit crime occurs more because some individuals have more significant opportunities than others in South Africa and lastly, to establish whether individuals in South Africa are forced into selling counterfeit products or whether it is a decision that they make on their own. The discussion below elaborates on the findings of the study in relation to the abovementioned objective.

When the researcher asked the participants what they thought were the main factors that cause counterfeit products to become easily accessible, they provided a range of responses, with some views overlapping with others. Some participants identified factors such as weak border control, poverty, profitability, affordability and corruption as the main factors for readily available counterfeit products. Riley (2017) concurs with the current study by stating that some of the main factors resulting in easy access to counterfeit products are demand for affordable products, weak border and customs control, weak police presence at the borders, ample opportunity for quick and easy money and poverty. These factors were also highlighted in the current study and will be discussed in detail below:

6.6.1 Unemployment leading to poverty

The study revealed that 8 out of 25 participants (32% of the study sample) stated that unemployment is a factor in counterfeit products being easily accessible. The participants expressed that unemployment has led to greater poverty in recent years, with healthcare becoming a budget cut for many households. Globally, the onset of the COVID-19 pandemic exacerbated unemployment and poverty even further (Shang *et al.*, 2021). The participants stated that those stricken by poverty turned to counterfeit pharmaceutical products when they were ill as they were unable to afford medication from legitimate pharmacies, and the healthcare system often leads to several people waiting lengthy periods for treatment that they are not guaranteed to receive. This finding is confirmed by Robert Agnew's general strain theory, which explains that because of the strain and frustration of not having an income to

afford proper medical treatment or being able to receive it in time from government hospitals, people resort to purchasing counterfeit versions to treat themselves despite the uncertainty of the product being able to assist them to feel better (Agnew & Brezina, 2019). This theory assists in explaining that purchasing the counterfeit version of the required product releases the strain of being unable to acquire the original product or any product overall. The participants highlighted that during the lockdown in 2019, following the onset of the COVID-19 pandemic, pharmaceutical products drastically increased in price, and many who lost their employment due to the pandemic were purchasing counterfeit alternatives. Some participants went further to state that patients on chronic medicines also purchased the counterfeit version because they needed the medicine but did not have the income to obtain it legitimately. Ziavrou *et al.* (2022) and Jones (2019) attest to the findings above and share the view that chronic medicine is the medicine that is required for an individual to survive, and without the income to purchase them or the ability to obtain them through the hospital, people are forced to obtain counterfeit alternatives.

6.6.2 Demand

The current study revealed that 56% of the participants stated that counterfeit pharmaceutical products are easily accessible due to their increasing demand. Some participants indicated that the demand for counterfeit pharmaceutical products increased at the onset of COVID-19 due to widespread fear of contracting the sickness. In contrast, others reported that the demand for counterfeit pharmaceutical products has always been present as they are more affordable than the original. This study finds that due to the shortage of pharmaceuticals during the pandemic, people turned to counterfeit alternatives to secure themselves with a version of medicine that may help them and their families should they become ill. The participants revealed that the fear of getting sick and not having the aid of medicine resulted in fear and panic globally, which inevitably led to an increase in the demand for counterfeit pharmaceutical products. They continued to explain that counterfeit pharmaceutical products were in demand due to individuals being able to easily access them since they are readily available in business hubs such as Durban Central and at a rate that many could afford to purchase them. The participants highlighted that before the lockdown, people were informed of the common symptoms of COVID-19 and were frantic about obtaining common flu medicines such as Flutex, Corenza C, ACC200 and immune boosters. However, many could not afford such items at the pharmacy, but the demand for them remained. As a result, counterfeiters provided an option for those individuals, deceiving them into believing that their products were the same as those

sold at pharmacies (Roy, 2020). The findings above are confirmed by Modisakeng *et al.* (2020), who state that counterfeiters are aware of situations that demand specific products and use the opportunity to insert their enterprise into the supply chain. Fincham (2021) further confirms that the concept of *supply and demand* is always heightened in instances that involve fear of illness, panic, desperation to heal oneself and affordability, as the current study finds above.

6.6.3 Profitability

When asked this question, 52% of the participants stated that profitability is one of the most significant contributing factors to counterfeit pharmaceutical products being easily accessible. The participants revealed that counterfeiters can make quick money with little to no effort. Some participants expressed that the greed to make a large sum of money without working hard to earn it entices individuals. The pandemic resulted in many individuals losing their employment, and the prospect of earning an income through counterfeit pharmaceutical crime appeared as a solution (Fontaine, 2019). The study similarly revealed that the pandemic led to a greater demand for pharmaceutical products and simultaneously more opportunities for counterfeiters to meet this demand and financially benefit from contracting the illness's potential and unavoidable occurrence. The rational choice theory by Beccaria and Bentham supports this finding by explaining that counterfeiters can make their own decisions, using their own free will, based on the benefits and consequences of such a decision according to how they perceive such decisions (Ogu, 2013). Gilmour (2016) states that counterfeiters are aware of the crime they are committing, but their perceived benefit of earning a significant income without working hard outweighs their perceived risk of getting caught by law enforcement. In this study, the researcher finds that with the aid of public demand, counterfeiters possess enough motivation to voluntarily decide to trade counterfeit pharmaceuticals as they acknowledge the profit they are capable of making in a small amount of time with minimal effort, despite knowing that their product could be harmful to the end user.

6.6.4 Lenient legislation and its weak enforcement

When asked this question, 64% of the participants stated that lenient laws combined with weak border control, weak customs control and police corruption were among the most contributing factors to counterfeit products being easily accessible in South Africa. The participants expressed that counterfeiters bribe police officers at the borders to transport their products into the country, and in the event of them getting caught, they would receive a fine and be released, along with their counterfeited items. They added that customs control and border police have

a distinctive function of ensuring that counterfeit products do not pass through the border, but with police corruption, customs and border control do not ethically perform their duties. Burger (2015), cited in Thenga (2018), confirms this finding and concurs that the problem in policing is that some police officers do not carry out their active police duties righteously, with some succumbing easily to the financial motivation presented by criminals. The author continues by explaining that the policing of counterfeit products is made worse by officers who are not trained and, thereby, cannot enforce the law (Thenga, 2018).

Furthermore, Dereymaeker (2015) states that counterfeiting is not perceived as a serious offence, resulting in counterfeiters being fined and not sentenced. The penalties postulated for counterfeit crime are less severe when compared with those applicable to contact crimes, such as murder and assault, than with the consequences of counterfeit crime (Mohamed & Wahid, 2014). The researcher opines that the knowledge of such leniency of the law results in the prevalence of counterfeit crime in the country.

The researcher asked the participants if individuals resort to selling counterfeit pharmaceutical products because of certain life strains or stressors. The majority, 60% of participants, revealed that individuals do not sell counterfeit pharmaceutical products due to their stress, but for the monetary gain it provides. Some participants highlighted that counterfeiters know that selling these products is illegal, but their greed for quick and easy money motivates them to commit counterfeit crimes. Contrary to the above finding, the study revealed that 40% of participants stated that people sell counterfeit pharmaceutical products because of certain strains or stressors. The participants expressed that with the high unemployment rate in South Africa, counterfeiting is an easy alternative to earn some form of income to survive. They report that with poverty being rife, counterfeiting is easier than finding a job in the current South African economy. The general strain theory corroborates both the findings above by explaining that the frustration of not being able to earn a fair salary or possess superior quality things can influence individuals to commit counterfeit pharmaceutical crime so that they can make a more significant sum of money with far less effort than a job requires (Agnew & Brezina, 2019). The general strain theory further explains that the strain associated with unemployment and poverty contributes to individuals committing this crime as many have no other means of survival, and counterfeit pharmaceutical crime releases their strain by permitting an easy and fast solution to their financial difficulties (Agnew, 2017).

When asked if counterfeit crime occurs more because some individuals have more significant opportunities than others in South Africa, 64% of the participants answered *yes*. The participants revealed that some people can afford to do certain things, like go to school or university, which others may not be able to do. Such opportunities create a path for further opportunities (such as a well-paying job). The participants explained that people must find alternate ways to survive in unfortunate circumstances, and counterfeit crime appears feasible since it is not gruesome or aggressive. This study finds that adverse situations (such as the lack of education, poverty and unemployment) influence people to commit counterfeit crimes to earn money in a matter of a few hours so that they may provide daily for their families. In extreme situations, counterfeit crime is a solution for those who live daily (Roy, 2020).

In contrast to the findings above, 36% of the participants answered *no* to this question. These participants revealed that while circumstances may be unfortunate, another choice that does not involve committing a crime or selling a product that could potentially harm another innocent individual is always available. Some participants stated that counterfeiters want quick money and a lot of it, which is the reason they resort to counterfeit crime. It was also highlighted that opportunity does not influence counterfeit crime but rather that people commit it for the quick and easy financial benefit it offers compared to the effort needed to earn the same money through honest and legal means (McCarthy & Chaudhary, 2014).

Lastly, the researcher asked the participants if individuals are forced into selling counterfeit pharmaceuticals or whether it is a decision they make on their own accord. The majority, 68% of the participants, stated that it is a decision people make independently. The participants revealed that individuals are not forced into committing counterfeit crimes, but instead, they acknowledge the financial benefit associated with counterfeiting pharmaceutical products that are in demand and are attracted by the money attainable from committing this criminal act. Some participants said that some people may not see counterfeiting as a crime since they are not directly harming anyone.

The participants expressed that engaging in counterfeit crime is the individual's choice, mainly and usually influenced by financial greed. The rational choice theory affirms this finding and explains that people weigh the advantages against the disadvantages of counterfeit crime and make their own calculated decisions. Akers (2017) further confirms the findings above by stating that counterfeiters are rational and self-interested individuals who commit counterfeit crimes based on their assessment that it will be more profitable and rewarding than noncriminal

methods to achieve the desired benefit. Contrasting to the findings above, 40% of the participants expressed that while people are responsible for their choices and actions, they can be forced into counterfeit pharmaceutical crime to survive. The participants revealed that those who cannot find employment or do not earn enough to sustain their families may resort to counterfeiting for additional income. The general strain theory may be used to support the finding above by explaining that the strain of not having the financial means to survive or take care of one's family can influence a person's decision towards committing counterfeit pharmaceutical crime. The general strain theory illustrates that financial strain experienced by many leads to people engaging in counterfeit crime as an easy and quick method to better their financial situation while justifying that they are not injuring the end user.

6.7. Public health interventions that South Africa has in place to protect its citizens against counterfeit crime.

The researcher aspired to investigate the public health interventions that South Africa has in place to protect citizens against counterfeit pharmaceutical crime. To achieve this objective, the researcher sought to determine if there is enough awareness surrounding counterfeit crime in South Africa, whether South African citizens are aware of counterfeit pharmaceutical products, how South African citizens are protected against counterfeit pharmaceutical products and whether the participants were aware of any public health interventions that protect individuals from counterfeit pharmaceuticals. The discussion below relates to the objective noted above.

The researcher began by asking the participants whether there is enough awareness surrounding counterfeit crime in South Africa. The majority, 88% of participants, answered no and stated they had insufficient awareness. Conversely, 12% of the participants revealed that there is awareness, but circumstances, such as unemployment and poverty, combined with the cost of living, compel individuals to purchase counterfeit versions of medical products. The researcher followed up this question by asking the participants if South Africans knew about counterfeit pharmaceutical products. The majority, 64% of participants, expressed that South Africans are unaware of counterfeit pharmaceutical products. The participants disclosed that only advanced individuals are aware of counterfeit pharmaceutical products, not those living in rural areas.

In contrast, 36% of the participants indicated that South Africans are aware of counterfeit pharmaceuticals but proceed to purchase them because they cannot afford the original product. The participants expressed that their inability to differentiate the original product from the

counterfeit product makes them feel they can purchase a product they want without paying the actual store price. The researcher opines that even with awareness, counterfeit pharmaceuticals will continue to sell as people are unable to afford their authentic versions under circumstances of unemployment and poverty in South Africa.

The researcher asked the participants how South Africans are protected against counterfeit pharmaceutical products. The majority, 65% of participants, asserted that the existing legislation and enforcement protect South Africans. They revealed a counterfeit law in place (the Counterfeit Goods Act 37 of 1997) specifying how a counterfeit crime should be dealt with and how such laws, when enforced, protect people. The study finds that the Counterfeit Goods Act 37 of 1997 allows law enforcement to police counterfeit crime and ensures counterfeit products do not reach communities (Riley, 2017). The participants expressed that the existence of proper legislation permits them to investigate and confiscate counterfeit pharmaceuticals coming into the country correctly and prevents them from being sold on the street. The participants view this level of policing to be effective in protecting citizens.

In contrast, this study finds that 35% of the participants indicated that South African citizens are not protected against counterfeit pharmaceutical products. They expressed that for most people living in the rural parts of the country, there is no awareness of counterfeit pharmaceutical products, leaving those individuals with no distinct knowledge of counterfeit pharmaceutical products to educate themselves and those around them. Some participants further stated that in rural areas, people trust their local healthcare providers and do not question the medicine given to them. Jones (2019) confirms this finding and further adds that without awareness drives, people in rural areas cannot differentiate original pharmaceutical products from their counterfeit versions, leaving them unprotected against the dangers of counterfeit pharmaceutical products.

Finally, the participants were asked if they knew of public health interventions protecting South Africans against counterfeit pharmaceutical products. The majority, 84% of participants, stated they were unaware of any interventions. In comparison, 8% revealed that SAHPRA provides programs and posters to communities to educate them and make them aware of counterfeit pharmaceutical products. Additionally, 8% of the participants expressed that the Medicine Control Council exists to assert awareness of pharmaceutical products and their counterfeit versions (Gao, 2018). The current study revealed limited awareness surrounding counterfeit pharmaceutical products, resulting in the prevalence of counterfeit items in South Africa

(Ncube, Dube & Ward, 2021). The present study also reveals that awareness of counterfeit pharmaceuticals is not a priority since counterfeit pharmaceutical crime does not appear to be a severe offence to the government. As indicated earlier in the study, counterfeit pharmaceutical crime does not compare to contact crimes in severity. It will only become widely publicised to educate citizens when it involves the loss of human life (Maguire, 2018). The researcher opines that efforts to establish firm awareness drives on counterfeit pharmaceutical products may only begin to take shape in the country if something shocking occurs. This would spark primary public concern and paranoia about pharmaceuticals (Kabiri *et al.*, 2023).

6.8 Conclusion

In this chapter, the researcher achieved the objectives of the study. The current study's findings were supported by knowledge generated from the study's findings and through the existing literature on the research topic. The study finds that weak border control, lack of ethical customs and border police officials, public demand and affordability of counterfeit pharmaceutical products contribute to the extent of the research phenomenon in South Africa. The study revealed that training on counterfeit crime does not occur regularly and may not be accessible to all officers since such training occurs when resources are available and for no more than one week. The study finds that the Counterfeit Goods Act of 1997 remains sufficient but does require advancement to cater for counterfeit crimes emerging over time. Through the findings of this study, the researcher discovered that the internet facilitates criminal organisations by providing them with encryption and anonymity to conduct counterfeit crime while remaining faceless through the use of VPN’s and the dark web, making it difficult for law enforcement to track and detect their organisations. The study finds that factors such as unemployment, lenient laws, demand and profitability make counterfeit pharmaceutical products more easily accessible in South Africa. Lastly, the study revealed a great limitation in public health interventions surrounding counterfeit pharmaceutical crime in the country. At the time of this study, no definite awareness program was known to the study’s sample. In the following chapter, the researcher will focus on a summary of the study and provide recommendations based on its findings.

CHAPTER 7: CONCLUSION AND RECOMMENDATIONS

7.1. Introduction

This chapter provides a summary of the entirety of the study and permits the research questions to be answered. In this chapter, the researcher will provide answers to each of the research questions set out for the study in chapter 1. The researcher will elaborate on the findings of the study thereby providing answers to the researcher questions. The researcher will emphasise noteworthy findings while answering the research questions to emphasise the gaps in existing knowledge that have been filled as a result of conducting this study. Following this discussion, the researcher will elaborate on recommendations that have emanated from the study's findings. The researcher will discuss the contribution of the study and provide direction for future researchers to embark on a study to further the existing knowledge of counterfeit pharmaceutical crime in South Africa.

7.2. Conclusion of the study

This study focused on the criminological examination of counterfeit pharmaceutical products in South Africa. The study aimed to present an insight into the country's extent of counterfeit pharmaceutical products. The researcher employed the rational choice and general strain theories to support this study. The rational choice theory by Cesare Beccaria and Jeremy Bentham focuses on an individual's free will, logic and rationalisation in making decisions. This theory employs the premise of voluntary actions based on the perceived benefits and risks of committing a crime. The general strain theory by Robert Agnew emphasises the role of stress, anger and frustration in influencing criminal behaviour. This theory focuses on the individual releasing their negative emotions through criminal behaviour. The rationale for selecting these two theories is that each is appropriate and applicable to explaining the research topic.

In relation to the study's methodology, the researcher employed an exploratory research design wherein the researcher intended to acquire a greater understanding of counterfeit pharmaceutical crime in South Africa. The study adopted a qualitative researcher method and a sample of 25 law enforcement officers with experience in counterfeit crime. The study sample consisted of 14 officers from the Prospecton Commercial Crime Branch and 11 from the Directorate for Priority Crime Investigations (commonly called the *Hawks*). The researcher purposely selected this sample as they have knowledge and experience of the research topic

and are well-vested in the phenomenon under study. The researcher used non-probability sampling and specifically employed the purposive and snowball sampling techniques. Data was collected using a semi-structured one-on-one interview whereby the researcher used an interview schedule containing predetermined questions formulated from the literature review data. Data collected during the interviews were analysed using thematic content analysis.

The researcher has maintained full adherence to the ethical considerations when conducting this study, ensuring that the relevant gatekeepers permitted the officers to participate. The researcher reassured the participants that confidentiality and anonymity would be maintained throughout their participation in the interview and stipulated that their participation in the study was voluntary and that they may withdraw at any stage of the interview. In conclusion, the objectives of the study were achieved.

The researcher identified the following limitations:

- The participants were initially hesitant to participate in the study as this is a topic that is considered high profile, and they feared that sharing their knowledge and experiences would result in them facing repercussions with their superiors;
- The researcher experienced difficulty gaining access to the correct police departments in Durban. The time taken to obtain permission to access the provincial departments, over and above the initial gatekeeper permission received from the SAPS Research Component to access SAPS officers, resulted in a delay in the study's data collection process.
- Data collection did not always occur when scheduled, causing it to take longer than the researcher anticipated. The researcher would schedule interviews with the participants, and upon arrival, she would be asked to reschedule for another day. In some instances, this rescheduled visit would be postponed yet again.
- The researcher experienced limited resources, such as finance for travelling to the participants. The rescheduling of interviews often meant a wasted trip, and the researcher had to return to the study site on a separate occasion.

The research objectives of the study were achieved, and the research questions were answered. The discussion below pertains to the answering of the research questions.

7.3. Answering the study's research questions.

The study consisted of 6 research questions that were each answered through the study's findings as follows:

7.3.1. Research question 1: To what extent are counterfeit pharmaceutical products being produced in South Africa?

The study finds that counterfeit pharmaceutical products are not necessarily produced in South Africa but are brought into the country as a result of porous borders, scarcity of law enforcement at the borders to prevent counterfeit pharmaceutical products from entering the country, high demand for more affordable pharmaceutical products and the opportunity to financially benefit from the fear, panic and desperation surrounding sickness as well as the COVID-19pandemic. The study finds that the onset of the COVID-19 pandemic exacerbated the occurrence and demand for counterfeit pharmaceuticals and that counterfeiters are financially motivated to fulfil the demand for pharmaceutical products. The researcher comprehensively discussed the above objective in the previous chapter.

7.3.2. Research question 2: How are South African police officials trained to detect counterfeit pharmaceutical products?

The study finds that 60% of the participants indicated that they received either formal or informal training, with some stating that they received both. The study finds that formal training takes place in the form of workshops, seminars and conferences, which extends over one day, three days or one week, while informal training is ongoing and includes the officers gaining knowledge through current and previous cases that they have worked on. The study revealed that police officers do not receive formal training regularly, with some participants indicating that it occurs only when required or every couple of months. The study discovered that a majority of 60% of participants expressed that there are no pre-requisites to be trained as an officer to detect counterfeit pharmaceuticals. Additionally, 44% of the participants stated the last training program they were provided was before the COVID-19 pandemic in 2019, with 48% stating that they do not receive follow-up training.

7.3.3. What limitations exist within the current South African legislature relating to counterfeit crime?

The study finds that the legislature surrounding counterfeit crime is limited in that it permits much leniency towards counterfeiters by imposing a fine rather than a term of incarceration for the accused counterfeiter. This creates and allows for recidivism amongst counterfeiters as their

punishment is not a sufficient deterrent for their crimes. In addition, the Act is limited by allowing only the brand ambassador to file a complaint for police officers to open up a case file. The study finds that this is sometimes challenging to achieve as brand ambassadors, especially those from popular international brands, are difficult to reach. The study discovered that a significant limitation of the Act is the stipulated time frame in which certain procedures must be completed and specific documents must be submitted. For example, the brand ambassador must file a complaint within three days of apprehending the accused for the case to be opened and to progress further. Failure to meet this time frame results in the counterfeiter and his goods being released. While it is not a significant limitation of the Act, it is noteworthy to add that the study revealed that the Counterfeit Goods Act 37 of 1997 is limited in that it does not cater for the inclusion of emerging counterfeit crimes, such as counterfeit pharmaceutical crime. The Act covers counterfeit crime as a broad category but does not provide specifics on how to police or enforce the legislation relating to counterfeit pharmaceuticals.

7.3.4. How does the internet facilitate criminal organisations dealing with counterfeit pharmaceutical products?

The study finds that the internet facilitates criminal organisations by allowing counterfeiters to operate anonymously and behind layers of encryption, thus making it challenging for law enforcement to trace and identify them. The study revealed that counterfeiters that operate through the internet are technologically advanced and resourceful and are aware of how to utilise the dark web and VPN's to hide their identity and location. The study finds that the internet, along with its anonymity and encryption, helps counterfeiters create a broader platform to establish online pharmacies that do not raise suspicion but permit their organisation to continue selling counterfeit pharmaceuticals. In addition, the study finds that with the internet allowing counterfeiters to generate a vast online presence, counterfeiters can reach a greater scope of end users through the existing social media platforms. Consequently, they can reach more buyers on various online platforms, such as Facebook and Telegram, while concealing their identity and avoiding detection from law enforcement.

The internet facilitates criminal organisations in selling counterfeit pharmaceuticals by providing them with an easily accessible platform that it scarcely policed by law enforcement and frequently used by the public, thus allowing their illegal trade to thrive more securely. Furthermore, the study reveals that 80% of the participants expressed that the internet protects criminal organisations by providing layers of encryption to their digital footprint through the

use of VPN's and the dark web. The study uncovers that criminal organisations use the internet to deal in counterfeit pharmaceutical crime as it ensures that their location and identity remain undetectable and untraceable while permitting access to several online platforms to extend their enterprise further.

7.3.5. What factors contribute to the influx of counterfeit pharmaceutical products in South Africa?

The participants were asked about the factors that cause the prevalence of counterfeit pharmaceutical products in South Africa. The study finds that while various factors cause an influx of counterfeit pharmaceutical products in the country, the most contributing factors are unemployment that leads to poverty, demand for affordable pharmaceutical products, profitability, and lenient legislation and its poor enforcement. The researcher has intensely discussed these factors in the previous chapter. In addition, the study finds that 60% of participants expressed that individuals do not sell counterfeit pharmaceuticals due to strain or stress within their daily lives but purely for the monetary benefits they wish to gain. Furthermore, 64% of participants expressed that individuals commit counterfeit pharmaceutical crimes as a result of the lack of opportunities (such as going to school or university to secure a well-paying job upon completion). In comparison, 36% of participants indicated that despite unfortunate circumstances, there are honest alternatives other than committing a counterfeit crime. The current study reveals that 68% of participants indicated that individuals choose to commit counterfeit crimes by a decision made on their own accord to enrich themselves financially.

7.3.6. What public health interventions does South Africa have to protect citizens against counterfeit pharmaceutical products?

The study finds that 84% of the participants were unaware that South Africa has any public health interventions currently to protect citizens against counterfeit pharmaceutical products. The study revealed that individuals are protected against counterfeit pharmaceutical products through the current legislature that South Africa has in place surrounding counterfeit crime and its enforcement. Additionally, 8% of the participants expressed that SAHPRA provides posters and programs to educate the community about the dangers of counterfeit pharmaceutical products, and another 8% of participants indicated that the Medicine Control Council exists to ensure awareness about counterfeit pharmaceuticals. The study finds that 88% of participants highlighted that there is not enough awareness surrounding counterfeit crime in South Africa, with a further 64% stating that South Africans are unaware of counterfeit pharmaceutical

products. The study's findings highlight that there is limited awareness surrounding counterfeit crime in South Africa, with little focus on counterfeit pharmaceutical crime.

7.4. Recommendations

The following discussion pertains to the recommendations presented by the researcher as emanated from the findings of the study.

7.4.1. Future research

The researcher recommends that future researchers should research the effects of counterfeit pharmaceuticals on chronic medicine users and the dangers that ingesting it might have on an individual who requires the legitimate version. The current study identified that consuming counterfeit pharmaceutical products could be fatal. The likelihood of chronic medicine users considering counterfeit alternatives in comparison to the original product increases as the possibility of unemployment and poverty increases. Future criminologists may want to examine further the criminality attached to selling counterfeit pharmaceuticals to individuals who rely on such medicine to stay alive. As this aspect of counterfeit pharmaceutical crime was not part of the current study, future researchers may wish to study and elaborate further on this aspect of the phenomenon.

Future research is required on the detection of counterfeit pharmaceutical products, especially at the country's entry points and with specific attention on South Africa’s land borders. The current study highlighted that weak border control is one of the primary reasons for the prevalence of counterfeit products in the country. However, further insight is required on what happens at the borders, which results in counterfeit products coming through. Future researchers should pay special attention to highlighting the necessity for detection tools, such as handheld scanners, to increase the swiftness and effectiveness of law enforcement duties at South Africa’s borders. Additionally, future researchers should investigate the eligibility criteria of law enforcement officers stationed at the country’s border to examine if limited expertise in border control influences the prevalence of counterfeit pharmaceutical crime.

Finally, other researchers may want to investigate further the training of police officers and the pre-requisites of being included in specialised units of the SAPS. They may also wish to explore the consistency and duration of formal training provided to officers on counterfeit crime. The current study found that police officers receive training, but there is limited knowledge surrounding their training on counterfeit products and the individual requirements

to be a part of a unit that receives such particular training. Researchers can expand on the phenomenon by using a bigger sample size across different provinces for greater deduction and/or comparison.

7.4.2. Recommendations to law enforcement

All police officers should receive some induction on counterfeit products but with a greater focus on those products that could result in fatality, such as counterfeit pharmaceutical products. With the current prevalence of counterfeit crime in South Africa, an induction course should be included at the entry level so that police trainees know what they should look for if they come across counterfeit products at the onset of their duty. Additionally, those officers with several years of experience and knowledge on counterfeit crime should offer a brief 30-40 minute training and educational seminar to allow other officers to educate themselves about trends in counterfeit crime. It should also be prioritised that brand ambassadors be frequently contacted to conduct training courses with counterfeit crime units, and perhaps station commanders should create a liaison with them so that training on the counterfeiting of popular brands can take place more frequently to allow officers to be up to date with the current trends in counterfeiting a specific brand. The researcher recommends that if such training is not feasible, a handful of officers should receive updated training courses from brand ambassadors and experts in the field and subsequently transfer the information learnt to the remaining members within the unit through a debriefing seminar.

7.4.3. Recommendations to the government

The researcher recommends that the South African government, together with the relevant role players (such as the Department of Health), implement functioning and effective approaches to create awareness of counterfeit products in general and, specifically, counterfeit pharmaceutical products. There should be initiatives extending to all parts of South Africa (city and rural), either through fieldwork, social media, word of mouth or clinic posters. Healthcare professionals should accompany such awareness campaigns to ensure communities receive the message from a trusted and knowledgeable source. Healthcare professionals who have firsthand experience with counterfeit pharmaceuticals should endeavour to either visit rural healthcare facilities or use social platforms, such as Zoom, to educate doctors and healthcare workers in rural areas that may not receive the latest information regarding pharmaceutical products to warn them of advancements in certain medical supplies that may not be authentic. The researcher recommends that for the prevalence of counterfeit pharmaceutical crime to decrease, awareness campaigns need to be a priority. Such awareness should be accessible to

every citizen through a pamphlet, radio or television or consult with their local healthcare workers.

7.4.4. Recommendations to the community

The researcher strongly recommends that the community continuously educate themselves on the harms of counterfeit pharmaceuticals and the effects of ingesting substandard medicines on the human body. Under the assumption of providing relief to a medical condition, the consumption of counterfeit pharmaceuticals can result in more illness instead of relief from it. The researcher recommends that individuals visit registered healthcare providers or hospitals to ensure that they receive treatment with medication that is authentic and safe for human usage. While circumstances may force an individual to use cheaper alternatives, the researcher advises against such decisions. The dangers of counterfeit pharmaceuticals and the extent of their existence are evident when reading this study. This study aims to educate, inform and highlight to citizens that counterfeit pharmaceuticals are harmful and damaging to human life and should be avoided. Through this research study, the researcher hopes that communities will be wearier of pharmaceuticals given or sold to them outside healthcare facilities. The researcher believes that upon reading this study, individuals will be more inclined to ask questions or queries to their pharmacist or doctor when they receive medication in a suspicious or questionable form. The researcher recommends that individuals pay close attention to the presentation of their medicines to identify discrepancies should they ever be given counterfeit versions. To ensure good health and livelihood, the researcher emphasises the need for individuals to continue educating themselves and their families on counterfeit pharmaceutical products and their latest versions circulating in communities nationwide.

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APPENDICES

APPENDIX A: ETHICAL CLEARANCE

14 November 2021

Trevonia Nihal (213503014)
School Of Applied Human Sc
Howard College

Dear T Nihal,

Protocol reference number: HSSREC/00003575/2021
Project title: Counterfeit Pharmaceutical Products in South Africa: a Criminological Perspective
Degree: PhD

Approval Notification – Expedited Application

This letter serves to notify you that your application received on 25 October 2021 in connection with the above, was reviewed by the Humanities and Social Sciences Research Ethics Committee (HSSREC) and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

This approval is valid until 14 November 2022.
To ensure uninterrupted approval of this study beyond the approval expiry date, a progress report must be submitted to the Research Office on the appropriate form 2 - 3 months before the expiry date. A close-out report to be submitted when study is finished.

All research conducted during the COVID-19 period must adhere to the national and UKZN guidelines.

HSSREC is registered with the South African National Research Ethics Council (REC-040414-040).

Yours sincerely,

[redacted]

Professor Dipane Hlalele (Chair)

/dd

Humanities and Social Sciences Research Ethics Committee
Postal Address: Private Bag X54001, Durban, 4000, South Africa
Telephone: +27 (0)31 260 8350/4557/3587 **Email:** hssrec@ukzn.ac.za **Website:** http://research.ukzn.ac.za/Research-Ethics
Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

26 October 2022

Trevonia Nihal (213503014)
School Of Applied Human Sc
Howard College

Dear T Nihal,

Protocol reference number: HSSREC/00003575/2021
Project title: Counterfeit Pharmaceutical Products in South Africa: a Criminological Perspective

Approval Notification – Recertification Application

Your request for Recertification dated 20 October 2022 was received.

This letter confirms that you have been granted Recertification Approval for a period of one year from the date of this letter. This approval is based strictly on the research protocol submitted and approved in 2021.

Any alteration s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study must be reviewed and approved through the amendment /modification prior to its implementation. Please quote the above reference number for all queries relating to this study.

PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years

HSSREC is registered with the South African National Research Ethics Council (REC-040414-040).

Yours sincerely,

[redacted]

Professor Dipane Hlalele (Chair)

/dd

APPENDIX B: GATEKEEPERS LETTER

South African Police Service — Suid-Afrikaanse Polisiediens

Privaatsak Private Bag X94	Pretoria 0001	Faks No. Fax No.	(012) 334 3518

Your reference/U verwysing:

My reference/My verwysing: **3/34/2**

THE HEAD: RESEARCH
SOUTH AFRICAN POLICE SERVICE
PRETORIA
0001

Enquiries/Navrae: **Lt Col Joubert**
AC Thenga
Tel: **(012) 393 3118**
Email: **JoubertG@saps.gov.za**

APPROVED

T Nihal
UNIVERSITY OF KWAZULU-NATAL

RE: PERMISSION TO CONDUCT RESEARCH IN SAPS: COUNTERFEIT PHARMACEUTICAL PRODUCTS IN SOUTH AFRICA: A CRIMINOLOGICAL EXAMINATION: UNIVERSITY OF KWAZULU-NATAL: DOCTORATE DEGREE: RESEARCHER: T NIHAL

The above subject matter refers.

You are hereby granted approval for your research study on the above mentioned topic in terms of National Instruction 1 of 2006.

Further arrangements regarding the research study may be made with the following offices:

The Divisional Commissioner: Visible policing and Operations:

- **Contact Person:** Lt Col L Geyser
- **Contact Details:** (012) 400 6367
- **Email Address:** GeyserL@saps.gov.za

The National Head: Directorate for Priority Crime Investigation:

- **Contact Person:** Brigadier M Mohajane
- **Contact Details:** 084 952 2230
- **Email Address :** MohajaneM@saps.gov.za

The Provincial Commissioner: KwaZulu-Natal:

- **Contact Person:** Lt Colonel DN Govender
- **Contact Details:** (031) 325 5809/4934
- **Email Address:** GovenderDN@saps.gov.za

The National Head: Directorate for Priority Crime Investigation has stressed that the researcher must provide a copy of the final research report to the Directorate for Priority Crime Investigation.

The Provincial Commissioner: KwaZulu-Natal has stressed that participation in interviews will be on a voluntary basis and respondents may refuse to answer questions implying sensitive

1

RE: PERMISSION TO CONDUCT RESEARCH IN SAPS: COUNTERFEIT PHARMACEUTICAL PRODUCTS IN SOUTH AFRICA: A CRIMINOLOGICAL EXAMINATION: UNIVERSITY OF KWAZULU-NATAL: DOCTORATE DEGREE: RESEARCHER: T NIHAL

information.

Kindly adhere to paragraph 6 of our attached letter signed on the **2021-09-17** with the same above reference number.

[redacted]

APPROVED

MAJOR GENERAL
THE HEAD: RESEARCH
DR PR VUMA

DATE: 2021-10-21

APPENDIX C: INFORMED CONSENT

Informed Consent Document

Dear Participant,

My name is Trevonia Nihal and I am a PhD Candidate studying at the University of Kwa-Zulu Natal, Howard College Campus. The title of my research is: *Counterfeit pharmaceutical crime in South Africa: a criminological perspective.* The aim of this study is to determine the significant extent of counterfeit medication in South Africa. The study aims to investigate how law enforcement officers and customs officials are trained to detect counterfeit pharmaceutical products. It aims to examine the various legislative frameworks that South Africa has in place to curb counterfeit crime and to conduct a policy analysis of the legislature to identify any shortcomings (if any). The study aims to investigate the role that the internet plays in facilitating criminal organisations that are dealing in counterfeit pharmaceutical products. This study will go further to investigate the various factors that contribute to the influx of counterfeit pharmaceutical products in South Africa as well as to identify the public health interventions that South Africa has in place to protect citizens against the dangers of counterfeit medicine and medical products. You have been selected to participate in this study for the reason that of you have first-hand experience with counterfeit crime. I am interested in interviewing you so as to share your experiences, perspectives and observations on the subject matter.

Please note that:

- The information that you provide will be used for scholarly purposes only.
- The benefit of participating in this study is that you will be contributing towards a body of knowledge that will aid future scholars and law enforcement officers to understand and combat counterfeit crime in South Africa.

- Your participation in this study is entirely voluntary. You have a choice to participate, not to participate or to stop participating in the research. You will not be penalized for withdrawing from the study.
- Your views in this interview will be presented anonymously. Neither your name nor identity will be disclosed in any form in the study.
- The interview will take roughly thirty (30) to forty-five (45) minutes.
- The record as well as other items associated with the interview will be kept in a password-protected files that will only be accessible to my supervisor and myself. After a period of 5 years, and in line with the regulations of the university, the information obtained from the interview will be disposed by means of shredding or burning.
- If you agree to participate in this study, please sign the declaration attached to this statement (a separate sheet will be provided for signatures).

I can be contacted at: School of Social Sciences, University of Kwa-Zulu Natal, Howard College Campus, Durban.

Email: trevonianihal2707@gmail.com

My supervisor is Dr Gerelene Jagganath, she is located at the University of Kwa-Zulu Natal and may be contacted via email. Her email address is pattundeeng@ukzn.ac.za.

The Humanities and Social Sciences Research Ethics Committee contact details are as follows: Email: hsrrec@ukzn.ac.za

Contact number: 031 260 4557/3587/8350

Thank you for your contribution to this study.

DECLARATION

I, _____ (full name of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in this study.

I understand that I am at liberty to withdraw from the study at any point, should I desire to do so.

I understand the intention of the research project and I hereby agree to participate.

I consent/do not consent to have this interview recorded.

SIGNATURE OF PARTICIPANT DATE

_____

_____

APPENDIX D: INTERVIEW SCHEDULE

UNIVERSITY OF
KWAZULU-NATAL
INYUVESI
YAKWAZULU-NATALI

Number of years of experience:

Section A: this section pertains to questions surrounding the extent of counterfeit pharmaceutical products existing in South Africa.

6. What do you understand by the term counterfeit pharmaceutical products?
7. In your opinion, how do counterfeit pharmaceutical products come to exist in our society and in South Africa?
8. How does the COVID-19pandemic influence the demand for pharmaceutical products?
9. How does the demand for pharmaceutical products during the COVID-19pandemic motivate counterfeiters?
10. Do counterfeit pharmaceutical products exist as a result of opportunistic events such as the COVID-19pandemic and public demand?

Section B: this sections entails questions surrounding the training of Customs Officials and Police Officers to detect counterfeit pharmaceutical products.

7 In your experience, what training is provided to customs officials and police officers to equip them to detect counterfeit pharmaceutical products?

8 What is the duration of the training that customs officials/police officers receive?

9 How often are law enforcement officers provided with training?

10 Are there any pre-requisites required in order to be trained as an officer to detect counterfeit pharmaceutical products? If yes, please explain what the pre-requisites are.

11 When did the last training programme for customs/police officers take place?

12 Do customs/police officers receive follow-up training to be up-to-date with current and modern detection techniques?

Section C: this section deals with questions relating to the legislature relating to Counterfeit crime in South Africa.

5. The Counterfeit Good Act of 1997 protects brand owners from having their trademarked items from being counterfeited. In your opinion, is the current Counterfeit Goods Act of 1997, sufficient to combat counterfeit crime in South Africa?
6. The latest amendment to the Counterfeit Goods Act was on 2001. Counterfeiters have advanced since then, what does this mean for law enforcers?
7. With your experience in mind, what are the pitfalls of the Counterfeit Goods Act of 1997, which makes it easier for counterfeiters to escape punishment?
8. In your opinion, how is the legislature surrounding counterfeit crime limited in South Africa?

Section D: this section deals with questions relating to the internet and how it may be used to facilitate criminal organisations.

4. With the internet at our fingertips, how does this tool prevent law enforcement from curbing counterfeit crime in South Africa?
5. Does the internet protect criminal organisations or make them susceptible to easier detection when using the internet to commit counterfeit crime?
6. In your opinion, why do criminal organisations resort to using the internet to engage in counterfeit crime?

Section E: this section pertains to questions surrounding the factors that contribute to the influx of counterfeit pharmaceutical products in South Africa.

5. What are the main factors that cause counterfeit products to become easily accessible in South Africa?
6. In your opinion, do individuals resort to selling counterfeit pharmaceutical products because of certain strains or stressors in their lives?
7. Do you think that counterfeit crime occurs more because some individuals have greater opportunities than others in South Africa?
8. In South Africa, are individuals forced into selling counterfeits or is it a decision that one makes on their own accord?

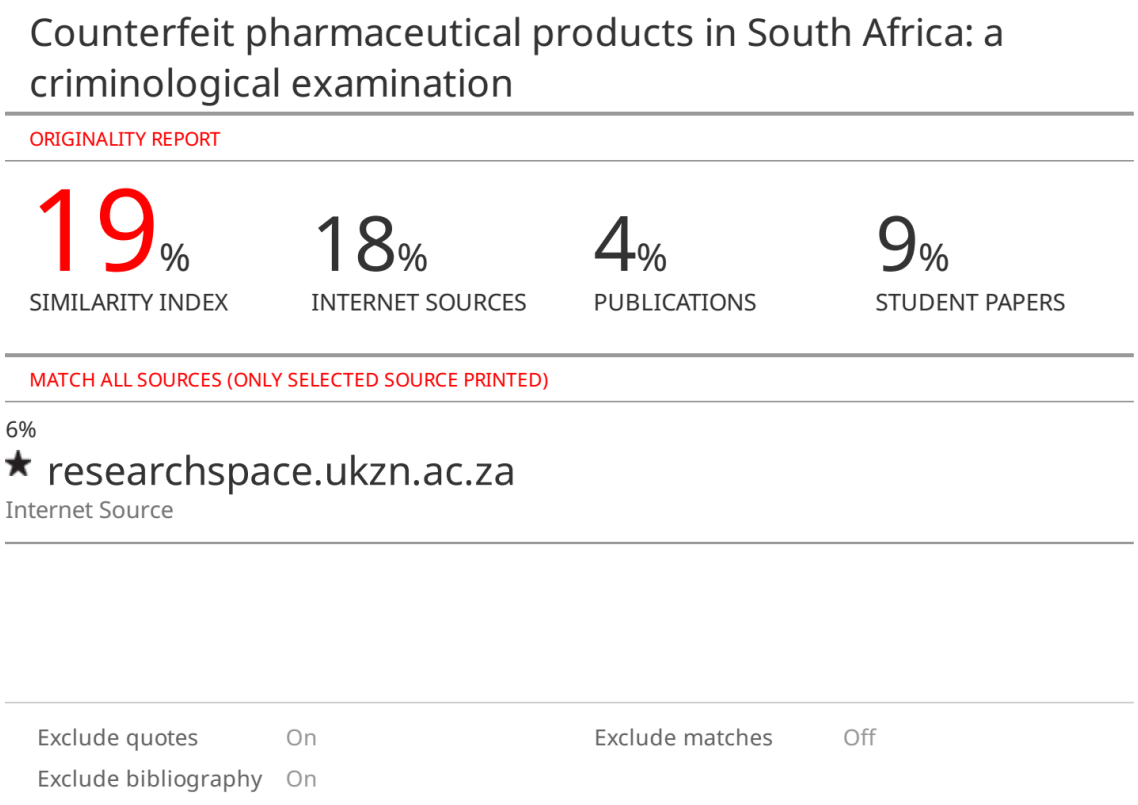
Section F: this section deals with the interventions that South Africa has in place to protect citizens against counterfeit crime.

5. Do you think that there is enough awareness surrounding counterfeit crime in South Africa?
6. Do you think that South African citizens are aware of counterfeit pharmaceutical products?
7. In your opinion, how are South Africans protected against counterfeit pharmaceutical products?
8. Are you aware of any public health interventions that protect South African citizens against counterfeit pharmaceutical products?

Section G: this section consists of questions that relate to the interview.

1. Are there any questions that you were unclear about and would like to revisit?
2. Do you have any questions on the topic of counterfeit crime?
3. Do you have any other experiences relating to one of the interview categories that you would like to share with the interviewer?

APPENDIX E: TURNITIN



Counterfeit pharmaceutical products in South Africa: a criminological examination

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APPENDIX F: EDITOR CONFIRMATION

GOOD TO GREAT RESEARCH

CONFIRMATION OF EDITING

21 December 2023

Client: Ms T Nihal
University of KwaZulu Natal
PhD Dissertation

Title: Counterfeit pharmaceutical products in South Africa: a criminological examination

Dear Ms Nihal

Thank you for the privilege of editing your submission in fulfilment of your PhD qualification entitled

Counterfeit pharmaceutical products in South Africa: a criminological examination

.

This letter confirms that this document has been edited :

- All grammar has been corrected.
- All punctuation and sentence construction has been corrected.
- Spelling has been corrected and standardised.
- Queries and recommendations are raised in the comments.

References:

- All references have been standardised to Harvard.

All the best!

Many thanks
[redacted]

Dr Ara Ramnund-Mansingh Ph.D (UKZN)
083-3665635
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