

**THE EVALUATION OF FORENSIC IDENTIFICATION TECHNIQUES IN THE  
INVESTIGATION OF GENDER-BASED VIOLENCE IN TSHWANE**

By

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Submitted in accordance with the requirements

For the degree of

**MASTER OF ARTS IN CRIMINAL JUSTICE**

In the subject

**CRIMINAL JUSTICE**

At the

**UNIVERSITY OF SOUTH AFRICA**

SUPERVISOR: Prof. D.Q MABUNDA

MARCH 2024

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## DECLARATION

I, **PHINDILE MICA NGCOBO**, hereby declare that this dissertation titled: **THE EVALUATION OF FORENSIC IDENTIFICATION TECHNIQUES IN THE INVESTIGATION OF GENDER-BASED VIOLENCE**, submitted to the University of South Africa, for the degree of **MASTER OF ARTS IN CRIMINAL JUSTICE** has not been previously submitted for any degree at this or any other university; that it is my own work in design and execution, and that all material contained herein has been duly acknowledged by means of complete references.

**Ngcobo PM Date: 28 November 2023**

Signed:

A handwritten signature in black ink, appearing to read 'Phindile Mica Ngcobo', enclosed within a faint, light-colored rectangular border.

## **DEDICATION**

I dedicate this research to my late grandmother (Zamafuze E Ngcobo) who laid the foundation of the woman that I am today. I am the disciplined, strong and hard-working woman that I am today because of her. May she continue to rest in peace and know that I will never forget her lessons.

## ACKNOWLEDGEMENTS

- ✚ I would like to thank God for affording me this opportunity to be where I am today with my studies without any interruption. *“My son, do not forget my teaching, but let your heart keep my commandments, for the length of days and years of life and peace they will add to you. Let not steadfast love and faithfulness forsake you; bind them around your neck, write them on the tablet of your heart. So, you will find favour and success in the sight of God and man.” Proverbs 3;1-4*
- ✚ I would like to extend my gratitude to my supervisor Prof DQ Mabunda for his support from the beginning of my research journey. I wouldn't be where I am without his support, advice, and motivation throughout my studies. May you continue brightening other students' futures with your words of encouragement and support. I am now a better person because of the knowledge and advice that you shared and I will also share it with others. I appreciate it.
- ✚ I would also like to thank my beautiful Mother (Ntombezinhle Ngcobo) and my Daughter (Sfundo M Ngcobo) for always showing support in this challenging journey that is filled with challenges.
- ✚ I humbly appreciate UNISA for considering me and further granting me the opportunity to pursue my dreams by offering me a bursary that contributed enormously throughout my studies.
- ✚ I would also like to extend my gratitude to my Employer Department of Correctional Services and my manager Mr Moela L for the support I received throughout my journey.
- ✚ The South African Police Service is sincerely appreciated for giving me the opportunity and time to carry out this study, as well as all my extremely helpful gatekeepers.
- ✚ I greatly appreciate the contribution of research participants from all the police stations, their contribution to this research is sincerely appreciated.

## **ABSTRACT**

The study explores forensic identification techniques used to investigate gender-based violence (GBV). The research critically evaluates the effectiveness and reliability of various forensic methods employed in identifying and analysing evidence related to gender-based violence cases. By examining the strengths and limitations of these techniques, the study aims to contribute valuable insights to the enhancement of forensic practices in addressing and combating this problem. South Africa is facing a challenge with GBV cases that are reported daily, some of these cases are not resolved on time. Forensic identification techniques significantly aid the process of investigation and provide reliable results that would lead to the successful prosecution of GBV offenders. To decrease the cases of GBV, detectives who deal with such cases must be equipped with knowledge of forensic identification techniques. Detectives must know how to manage a scene of crime and measures to protect a scene of crime from the individuals. This is done because a crime scene holds important evidence that is traced and positively linked with the perpetrator.

The researcher explained identification techniques that involve fingerprint identification, DNA identification, Eyewitness Identification, line-up identification, showups identification, photographic identification and voice identification. A qualitative research approach was adopted. Relevant literature study and structured focus group as well as telephone interviews were conducted with a sample of 15 participants from 5 Police Stations in Pretoria, Gauteng Province. Data was analysed using thematic data analyses. The findings of this study reveal that most detectives who specifically deal with gender-based violence have a clear understanding of forensic identification techniques. Finally, initiatives that can be adopted to improve the efficiency of all the detectives who deal with sensitive cases such as GBV are recommended. The implementation of these recommendations would enhance their performance and as well as contribute to the body of knowledge.

**KEY TERMS:** Criminal Investigation, Forensic Identification, individualisation, Identification, Evidence, Crime scene, gender-based violence.

## LIST OF ACRONYMS AND ABBREVIATIONS

<b>AIDS</b>	:	Acquired Immunodeficiency syndrome
<b>COVID-19</b>	:	Corona Virus Disease
<b>CSI</b>	:	Crime Scene Investigation
<b>DNA</b>	:	Deoxyribonucleic Acid
<b>DVA</b>	:	Domestic Violence Act
<b>FSC</b>	:	Family Violence, Child Protection and Sexual Offences
<b>FSL</b>	:	Forensic Science Lab
<b>GBV</b>	:	Gender-Based Violence
<b>HIV</b>	:	Human Immunodeficiency Virus
<b>MSM</b>	:	Men Who Have Sexual Intercourse with Men
<b>PCR</b>	:	Polymerase Chain Reaction
<b>PPE</b>	:	Personal Protective Equipment
<b>SADC</b>	:	Southern African Development Community
<b>SAPS</b>	:	South African Police Service
<b>SGBV</b>	:	Sexual and Gender-Based Violence
<b>VFP</b>	:	Vanuatu Police Force
<b>WHO</b>	:	World Health Organization
<b>ZRP</b>	:	Zimbabwe Republic Police

**MOHCDGEC** : Minister of Health, Community Development, Gender,  
Erdely and Children

## **CHAPTER ONE: GENERAL ORIENTATION**

### **1.1 INTRODUCTION AND BACKGROUND**

According to Hautzinger (2005), forensic identification and forensic science are fairly recent techniques. Criminal investigation procedures that prevailed up to the second half of the 19<sup>th</sup> century were hardly dependent on requesting a professional opinion of the crimes committed. They focused more on proof gained through the torture of the suspects. This approach changed in the Age of Enlightenment when criminal procedures became part of the law. The rights of suspects began to be respected and results of natural sciences began to be used. Furthermore, about thirty years ago, forensic investigation was identified as an approach that could, with enough practice, patience, and attention to detail, be used to certainly identify a suspect beyond any reasonable doubt (Lahn & Simpson, 2018).

In addition, Hautzinger (2005) mentioned that the major challenge in using forensic science in criminal investigation is the concrete identification of persons, subjects, scenes, and actions connected to a crime. Before the use of forensic science, identification was based only on the testimonies of the witnesses and visible traces of evidence fixed at the scene. There is now widespread use of forensic science to examine traces of evidence and it is gaining momentum. This research aims to evaluate and analyse forensic identification techniques used to investigate Gender-Based Violence, to help our criminal justice systems as well as curb the increase of this evil disease in South Africa. In South Africa, every day a woman or a child is murdered or raped, sometimes the perpetrators are known and sometimes they are not known.

This research was conducted to evaluate and learn more about forensic identification techniques used by the SAPS in the investigation of gender-based violence.

### **1.2 STATEMENT OF THE PROBLEM**

A problem statement is a situation a researcher experiences and wants to solve (Welman, Kruger & Mitchell, 2005:13). Moreover, a research problem is the basis of any research (Leedy and Ormrod, 2005:47). When conducting research, researchers must clarify what they are doing in each stage of their research. In addition, Williman (2011:29) mentioned



that a research problem is the central part of a study. A research problem is developed to establish the question that needs to be answered or the problem that needs to be solved a researcher has to limit the research to a particular research issue that will then define the research problem (Creswell, 2014:108).

The motive for conducting this study and for selecting gender-based violence which included rape, murder or any kind of abuse towards women and children in our country, is that recently or nowadays, we hear about gender-based violence cases every day on television and other social media. Cases of gender-based violence are increasing in our society and this is proof that our women and children are not protected. There are various incidents where you hear a case of a missing girl or woman who is later discovered murdered, raped and/or dumped somewhere. Normally, the perpetrators of such crimes are unknown and/or flee the scene, meaning, more women are in danger of this perpetrator.

The researcher was concerned about the use of forensic identification techniques in such cases, particularly where there are no eyewitnesses and where the perpetrator escapes the scene. Furthermore, the researcher was interested in knowing whether in cases where there is a use of the identification evidence, it is admissible in court. In addition, many crimes may be solved through learning so much about forensic identification techniques.

### **1.3 AIM AND PURPOSES OF THE RESEARCH**

The purpose of research is to find answers to questions and solutions by applying scientific procedures (Kothari, 2004:02). Research aims to find the hidden truth that has not yet been discovered. Moreover, Brynman, Bell, Hirschsohn, Dos Santos, Du Toit, Masenge, Van Aardt, & Wagner, (2014:5) explain that research is conducted primarily to find ways of improving organizational performance through increased effectiveness and efficiency. A study aims to establish the truth through facts, collect new data and discover thought-provoking patterns from the data (Mouton, 1996:103). The aims define the scope of the study and the objectives study (Denscombe, 2012:20). Exploration, description, and explanation are the three essential elements of a study (Babbie, 2010:92). This study aimed to:

- ❖ Evaluate the value of using forensic identification techniques to investigate gender-based violence.
- ❖ Determine the advantages and disadvantages of using and relying on forensic identification techniques.
- ❖ Empower and explore information regarding the use of forensic identification techniques.
- ❖ Recommend possible solutions that would enhance the performance of criminal investigators in solving cases of gender-based violence.

Research involves the systematic process of testing claims and evaluating knowledge. When those claims or that knowledge is not supported by evidence, they are discarded, and new ideas emerge (Withrow, 2014:7). The researcher was interested in the topic because of the high rate of gender-based violence in South Africa. Gender-based violence violates human rights and greatly affects the social development of the survivors of violence, their families, communities and society. GBV also affects the economy significantly. Health and criminal justice systems are burdened by high rate of GBV. The researcher hopes that this study will make an imperative contribution to the reduction of GBV crime. This is because forensic Identification techniques help authorities analyse evidence collected from crime scenes.

#### **1.4 OBJECTIVES OF THE STUDY**

The objectives of a study show the intentions of the researcher (Gray, 2014:53). Whilst the aims are based on statements that are not specific, objectives are based on clear and specific statements of projected outcomes that are measurable. Kumar (2011:62) stated that objectives provide the goals a researcher plans to achieve in a research project. It is important to word objectives clearly and specifically.

The objectives were to:

- ❖ Determine the value of using forensic identification techniques to investigate gender-based violence.
- ❖ Describe the different identification techniques that are used within criminal justice.

## **1.5 RESEARCH QUESTIONS**

Research questions make a study more specific by breaking down the aim into questions (Creswell & Clark, 2011:161). Withrow (2014:25) explained that researchers produce information using what is referred to as findings and share the findings with other researchers. The four overall objectives of research are to (i) answer research questions, (ii) resolve disagreements among researchers, (iii) fill gaps within the body of knowledge and (iv) produce more research questions. The questions to be answered in this study include:

- What is GBV?
- What is the crime scene and its management in the investigation of GBV?
- Who are the role players in the GBV crime scene?
- What is forensic identification and individualisation?
- What are the forms of forensic evidence used as identification techniques to investigate gender-based violence?
- What is the value of using forensic identification techniques to investigate gender-based violence?
- What are the different identification techniques that are used within criminal justice?
- What are the advantages and disadvantages of using and relying on forensic identification techniques?

## **1.6 RESEARCH DEMARCATION AND LIMITATIONS**

Terrell (2016:42) states that limitations are external constraints that are inherent to the study and can affect the generalizability of the results. On the other hand, delimitations are factors internal to the researcher that may affect the results.

The researcher would like to explain that while conducting this study, there were certain boundaries and limits with regards to the formulation of the research which included the lack of funding that was resolved at a later stage by obtaining a bursary from UNISA. Another limitation was the disapproval of conducting research by a forensic laboratory in Arcadia which forced the researcher to restructure questions that would accommodate

the participants that were involved in the study. In addition, participants from Sunnyside were not interested in participating in the study and based on ethical procedures, their rights were respected. The literature on this study focuses mostly on forensic identification techniques that are used internationally by investigators.

## **1.7 SIGNIFICANCE OF THE RESEARCH**

Research is used to understand problems and solve specific problems (Neuman & Robson, 2012:11). Furthermore, Kothari (2004:06) argues that research solves operational and planning issues. Research provides the intellectual satisfaction of establishing a body of knowledge and practical solutions to societal problems. Vanderstoep and Johnston (2009:40) highlighted that researchers justify basic research based on its contribution to the subject matter's body of research knowledge. The researcher would like to add that after the completion of this study, it is anticipated that it would contribute to her knowledge of evaluating the use of Forensic Identification techniques in crimes of gender-based violence. Moreover, this would help detectives to decrease the rate of GBV by applying this knowledge that would result in the prosecution of perpetrators. It is concerning that while most perpetrators commit crimes, it is difficult for police to find them because of insufficient evidence at the crime scene.

## **1.8 DEFINITION OF THE KEY TERMS**

Beach (2012:224) states that it is important to clearly define each key theoretical concept. Defining the key concepts prevents misunderstanding and facilitates communication (Leedy & Ormrod, 2005:119).

### **1.8.1 Forensic Investigation**

Bertino (2012:562) describes the forensic investigation as the use of scientific knowledge to answer legal questions. Van Rooyen (2008:14) defines forensic science as the court-directed application of scientific techniques to gain insights into how a crime was committed at the crime scene. Forensic science is sequential steps used to put together facts to solve a crime (Brown & Davenport, 2012:7).

### **1.8.2 Forensic Identification**

Turvey (2012:657) states that identification is the process of placing items into a distinct category. Items with similar characteristics are placed in the same. An item can only be put in a separate category if it has distinct features that properly differentiate it from the other items. Forensic science is the identification of physical indications that undergo scientific tests to identify them (Greene, 2007:562).

### **1.8.3 Investigation of Crime**

An investigation is an act of searching out and probing the particulars of an incident to comprehend the facts and uncover hidden, unique, or complex aspects such as motive, cause or culprit for the incident (Zinn & Dintwe, 2015:445).

### **1.8.4 Gender-Based Violence**

According to the Ministry of Health, Community Development, Gender, Elderly and Children (2017:9), violence that is directed against a person based on gender is called gender-based violence. It includes inflicting physical, mental, or sexual harm or suffering, threats of such acts, coercion and depriving liberty.

## **1.9 REVIEW OF RELEVANT LITERATURE**

According to Kumar (2014:49), literature review is the analysis of existing literature that helps support the study to understand the subject matter and conceptualise the study. Fink (2014) states that a literature review examines books, scholarly articles and any other relevant sources for particular area of study. It provides a description, summary and critical evaluation of literature that is relevant to the investigated problem. The literature review provides an overview of sources used by the researcher and shows the reader how the study fits in a field of study. Leavy (2017:56) defines a literature review as a process and a product. Furthermore, a literature review convinces the reader that the researcher is familiar with the subject matter and competent to conduct investigations (Vanderstoep & Johnston, 2009:10). In addition, it convinces the reader that the purpose of the study fits into the existing body of knowledge and explains how the proposed study is needed to fill a gap in the literature (Vanderstoep & Johnston, 2009:10). Kumar (2011:46) noted that reviewing literature enhances and consolidates the knowledge base of a researcher and helps the researcher to integrate their findings with the existing body

of knowledge. A literature review allows a researcher to compare the findings of his/her study to the findings of others. Thus, the review of literature plays an important role in research. Moreover, Davies, Francis & Jupp (2011:79) state that literature review discusses published work in a given field. It is an important part of an empirical study which shows the reader that a researcher has read widely on the chosen topic, gained a good understanding of the issue, acknowledged the context of the existing body of literature and highlighted research gaps. Kumar (2011:47) states that a literature review gives a researcher an idea of methods used by others, whether the methods are similar to what the researcher is proposing, which methods have worked well and what problems other researchers have faced with them. Dantzker, Hunter & Quinn (2018:40) mentioned that choosing a topic and finding either too little or too much information available in existing literature is frustrating. However, the existence of either too little or too much information should not prevent the individual from conducting the research.

In addition, Dantzker et al, (2018:44) indicate that a literature review provides a foundation through which both the reader and the researcher understand and evaluate a study. Withrow (2014:40) states that reviewing literature involves detailing existing knowledge on a certain topic and providing a description of areas of agreement and disagreement among researchers on the topic. Moreover, all research disciplines and research projects require relevant literature. The researcher begins by describing previous research to conceptualise and assess the research area, thereby formulating the aim of the study and identifying the research questions and hypotheses (Liberati, Tetzlaff & Altman, 2009).

Identification is the procedure of classifying physical evidence that is collected from the scene for scientific analysis in a forensic investigation (Zinn & Dintwe, 2015:45). Scientific evidence helps an investigator to focus the investigation using clues derived from physical evidence collected from the scene. Identification is premised on the fact that each item in the universe has characteristics that are specific to itself. Moreover, each organism can be identified through its unique DNA sequence. Identifying a person is a complicated process that requires forensic scientists to use a special scanner to view thirteen areas of DNA that differ from one person to another. The data from the scanner is used to produce DNA profiles that are unique for each individual except for identical twins

(Murnaghan, 2014). In addition, the National Research Council (2011) mentioned that forensic identification expertise includes fingerprints, handwriting, firearms (ballistics) and tool mark comparisons as well as shoe and tire prints. These techniques are used by crime laboratories to associate a suspect with a crime. These techniques involve comparing a known example with evidence collected from a scene or a suspect. Although not conducted in crime laboratories, bite mark analysis is a form of forensic identification. Bite mark analysis is developed within the field of forensic dentistry to aid dental identification. Some forensic disciplines attribute physical evidence to a particular source that can either be a person, object or location. Furthermore, Dianne (2018) states that forensic science is used to identify victims of crimes and victims of disasters. The use of the polymerase chain reaction (PCR) process allows the production of millions of copies of DNA from just a few skin cells. DNA techniques help tie criminals to a crime and victim DNA is used to identify deceased remains in disaster situations in situations where deceased bodies may not be identified by other means. This allows the deceased remains to be collected by the rightful families and gives closure to those families.

Forensic identification has transformed the methods of criminal investigation and improved the criminal justice system and many other key areas. The DNA of most people is associated with a crime because DNA left at crime scenes can be compared with suspects' DNA. The actual procedure itself is not easily understood by non-experts and rarely receives an in-depth description using non-technical terms. The applications of DNA techniques stretch far beyond criminal investigation (Murnaghan, 2014).

In addition, Gilbert (2007:442) mentioned that identification consists of information that identifies a person positively, is obtained lawfully and relates to and originates with that particular person. Forensic evidence encompasses many forms and to name a few, forensic scientists focus on comparing latent fingerprints found at a crime scene to standard prints obtained under a forensic order or existing in a database. The approach involves the comparison of bite marks on a victim using orthodontic analysis; DNA evidence; hair and fibre matching or anthropometric analysis (Coyle, Field & Wenderoth, 2009:214). For this research, the researcher reviewed literature on the internet, books as well and printed sources on forensic science and forensic identification. The researcher

had confidence that a review of literature based on forensic identification techniques conducted in other countries would be valuable in identifying the best practices and correct procedures to be used when investigating. The literature study aimed to establish a clear understanding of the definition of concepts related to forensic identification techniques.

### **1.10 METHODOLOGY FRAMEWORK OF THE STUDY**

The Oxford Dictionary (2014:14) defines a method as a systematic process to achieve an objective. Kothari (2004:10) mentioned that research methods are the actions and tools used in picking and making research procedures. Research methods are a way to solve problems systematically. Research methodology is a science of studying how to do research systematically. It involves studying the steps that are followed by researchers in implementing research projects. In the methods section of a research report, it is not enough to indicate the type and source of a researcher's data. The researcher must clearly state which variables were used and how they would have been measured (Hanneman & Kposowa, 2013:36).

Kothari (2004:10) states that methodology gives the researcher training in gathering material and arranging them, participation in the fieldwork and techniques for collecting data appropriate to particular problems, the use of statistics, questionnaires and controlled experimentation and recording evidence, sorting the evidence and interpreting it. Wilkinson (2000) emphasised that a research method is a procedure used to identify select, process and analyse data. The methods section helps a reader to evaluate the validity and reliability of a study. Dantzker et al, (2018:44) state that the methods section provides details of the procedures followed to enable readers to understand and critically evaluate the methods used in a research study.

### **1.11 THE PHILOSOPHICAL WORLDVIEW USED IN THIS STUDY**

Runco (2014), defines a worldview as a broad perspective of the universe. It indicates one's philosophy. There is a thin line between philosophy and worldview, however, philosophy plays an important role in human lives. Funk (2001) states that a worldview is a set of opinions about essential aspects of reality that form the basis of how a researcher perceives phenomena. A researcher's worldview is also his/her philosophy. This includes



the philosophy of life, mindset, outlook on life, formula for life, ideology, faith or religion. Philosophical ideas influence the practice of research and therefore they need to be identified (Creswell, 2009).

Creswell (2014:05) states that researchers decide on the philosophical worldview assumptions that form the base of the study during the planning stage. The research design and selected methods are closely related to the selected worldview (Creswell, 2014:05). Ibrahim and Heuer (2013:604) mention that a worldview is at the core of a client's cultural identity; composed of "beliefs, values and assumptions, derived from the socialization process in a specific cultural context". Leavy (2017:11) states that the worldview influences topic selection, methods, final representation and dissemination of results of the study.

#### **1.11.1 Post Positivist World View**

The post-positivist worldview is used more for quantitative research than qualitative research. This worldview is also called the scientific method. In addition, it follows the deterministic approach in which causes determine outcomes (Creswell, 2009:24).

#### **1.11.2 Anti-Positivist World View**

According to Trueman (2015), anti-positivism includes a high involvement on the part of the researcher and a low number of respondents. Furthermore, non-positivism, for example realism and interpretive approaches, pay more attention to the factors that are often ignored by positivism, for example, the social structure and value-led interpretive method (Buddharaksa, 2010).

#### **1.11.3 Interpretivist**

Hudson and Ozzane (1998) state that interpretivists believe that reality is multiple and relative rather than absolute. Furthermore, interpretivism is based on the fact that the truth and knowledge are subjective, are culturally and historically set, based on people's experiences and their understanding of the experiences. Researchers form their values and beliefs so that these would inevitably inform how they collect, interpret, and analyse data (Ryan, 2018).

#### **1.11.4 Constructionist View**

According to Creswell (2014:37), a constructive worldview has confidence in that individuals seek an understanding of the world they live and work. The individuals develop individual meanings of their experiences towards certain things. This results in various meanings that lead the researcher to look for the complexity of views and avoid narrowing meanings into a few categories.

#### **1.11.5 Pragmatic World View**

The pragmatic worldview is not based on past conditions as they believe that reality is everchanging and it is concerned with the application of what works and solutions to problems (Creswell, 2009:24).

### **1.12 RESEARCH APPROACH AND DESIGN**

Sileyew (2019) state that the approach also supports the researcher in how to come across the research result findings. A research design shows interlinkages between components of the study and shows the flow of the research from one stage to the other (Denscombe, 2010:100). A research design shows the consistency between the researcher's worldview on one hand and data collection and analysis on the other. Welman and Kruger (2001:46) define a research design as a plan for getting research participants and collecting data to answer the research questions.

According to Kumar (2011:67), qualitative and quantitative studies differ in the way the research problem is formulated. In quantitative research, researchers are more specific, focus the scope of their study and structure a framework to limit their research. For this research, the researcher used the qualitative approach. The researcher adopted a qualitative method, interviewing detectives dealing with GBV at the Tshwane South African Police Service (Family Violence, Child Protection and Sexual Offences). The researcher used the qualitative method since the aim was to acquire in-depth knowledge about the value of forensic identification procedures in the investigation of GBV by selecting a small group of detectives to participate.

### **1.12.1 Qualitative Approach**

Creswell (2014:3) states that qualitative research is used to explore and understand the meaning of social or human problems. Welman and Kruger (2001) describe Qualitative research as originating from sociology, social anthropology and social psychology. Qualitative research uses inductive rather than deductive reasoning. Questions are posed observational elements rather explain correlation between variables. There is a marked difference between qualitative and quantitative research i.e. in quantitative research the researcher is strictly not part of the phenomena being investigated (Leedy & Ormrod, 2001:49). According to Kumar (2011:68), the way a research problem is formulated in qualitative research differs from how it is formulated in quantitative research. A researcher does not determine the precise nature and degree of the research problem they seek answers to beforehand. Researchers generate theory from data in qualitative research and qualitative research is informed by constructionism and interpretivism and qualitative data analysis involves the exploration of a popular research question (Brynman, Bell, Dos Santos, Du Toit, Hirschsohn, Masenge, Van Aardt & Wagner, 2014:41). Qualitative research uses the inductive approach that is influenced by the experiences of the researchers during collecting and analysing data (Creswell, 2014:22). They use the inductive approach i.e.; the theory is generated from meaning generated from the data. The researcher uses a qualitative research design, a type of social science research, to collect and work with non-numerical data and seeks to interpret meaning from this data to comprehend social life through the study of targeted populations. The main disadvantage of qualitative research is that it uses small non-random samples that inhibit generalizing the results to the larger population from which the sample was drawn (Vanderstoep & Johnson, 2009:8).

### **1.12.2 Quantitative Research Approach**

Leavy (2017:9) states that quantitative research uses a deductive approach that is aimed at proving or disproving existing theories. Quantitative research measures variables and seek casual relationships between variables as well as reveal patterns and other inferential statistics. Szechenyi (2015:22) mentioned that quantitative research is based on the assumption that extensive quantitative data collection with a wide range of

systematic, regulated and unified measurements and numerical expressions are important tools in the process of gaining information as research questions can be answered based on that. Furthermore, there are two basic approaches to research i.e., the quantitative and qualitative approaches. Quantitative research involves rigorous quantitative data analysis with clear-cut hypothesis acceptance and rejection criteria. The qualitative approach is an individual assessment of attitudes, opinions and behaviour. Qualitative research depends on the researcher's intuitions and impression of data (Kothari, 2004:05).

### **1.12.3 Mixed Methods**

According to Creswell (2014:43), the mixed methods approach is based on the fact that all methods have bias and weakness and both quantitative and qualitative data counterbalanced the weakness of each other. Mixed method studies involve quantitative, qualitative and mixed methods questions. The mixed methods approach presents an integrated set of research questions through a combination of quantitative and qualitative hypotheses and questions and one or more quantitative hypotheses and one or more research questions of qualitative nature (Leavy, 2017:72).

### **1.13 SAMPLING**

According to Withrow (2014:160), sampling is a scientific technique that allows a researcher to learn about a population by studying a part of the population that may be representative of the entire population. Several sampling techniques can be used in research. Representative samples allow researchers to accurately predict the whole population. Maxfield and Babbie (2011:222) describe sampling as a selection of a representative fraction of the whole population. Sampling is obtaining information about an entire population by examining only a part of it. Research work and surveys usually draw inferences about the parameters of the population from the samples taken (Kothari, 2004:169).

In addition, Withrow (2014:161) mentioned that sampling allows researchers to learn a great deal about from a representative fraction of the population. Withrow further states that, in sampling, researchers save time and money by basing the study on a representative sample. Alvi (2016:12) defined sampling as the process of extracting a

sample from a population. In research, it is difficult to assess every single element of a population, therefore a representative fraction of the population is selected for the assessment. The results derived from analysing data collected from the representative sample are generalised to the whole population.

### **1.13.1 Probability Sampling**

According to Withrow (2014:168), probability sampling techniques use random selection and allow researchers to infer the results to a larger population from which the random sample was drawn. Maxfield and Babbie (2011:223) mentioned that Probability sampling gives each element of a population an equal chance of being included in the sample thereby eliminating selection bias. Furthermore, probability sampling is based on systematic random sampling, stratified sampling, cluster sampling, multi-stage sampling or area sampling (Etikan & Bala, 2017).

In addition, Kumar (2011:182) argues that in a random sampling design, each element of the population must have an equal chance of being considered. This implies that the probability of selection of each element of the population is the same and other considerations such as the researcher's personal preference do not influence which element included in the sample. Alvi (2016:14) states that probability can be assigned to each unit of the population objectively. Probability sampling requires that the size of the target population be well-defined. Probability sampling cannot be used for a population that is too general and not well defined.

### **1.13.2 Non-Probability Sampling**

According to Etikan and Bala (2017), non-probability sampling has selection bias as the elements are not given an equal probability of being included in a sample. Non-probability sampling is mostly used in case study and qualitative research (Taherdoost, 2016). Case studies are focused on small samples that are intended to examine a real-life phenomenon, not to make statistical inferences about the wider population. Moreover, the investigator selects an element into the sample based on subjective judgement. Non-probability sampling does not require the investigator to define the population precisely. It can be used for a population that is too general or a specific population (Alvi, 2016:14).

### **1.13.3 Purposive Sampling**

Leavy (2017: 98) states that purposive sampling involves selecting elements that are expected to produce the best data and research results for the study. Members of the population that are expected to contribute information that addresses the research questions are selected. Leedy and Ormrod (2005:206) emphasised that in purposive sampling, elements are chosen based on how they can contribute to the results of the study. People with particular characteristics are selected to contribute to examining a research problem. Kumar (2011: 186) mentioned that purposive sampling is used by researchers who want to construct describe a particular phenomenon or develop something about which only a little is known. Purposive sampling is commonly used in qualitative research-based studies. The researcher used a purposive sampling procedure because the participants that were selected for the study met the study's goals. Participants were chosen based on their experiences within the field of FSC.

### **1.13.4 Simple Random Sampling**

Taherdoost (2016:14) states that in a simple random sample, every element of the population has an equal chance of being included in the sample. Alvi (2016:16) also notes that simple random sampling allows all elements of a population an equal probability of being included in a sample. The population must be precisely defined.

## **1.14 POPULATION**

A target population is a population to which researchers generalise their results to (Welman, Kruger & Mitchell, 2005:14). Similarly, McMillan and Schumacher (2010:128) define a target population as a group of elements to which the researcher intends to generalise the results of the research. A population is a group to which the results of a study may be generalised. Population usually refers to the number of people living in a particular country (Taherdoost, 2016:14). A certain group of individuals with specific characteristics is a population (De Vos, Strydom, Fouche & Delpont, 2011:223).

In addition, Alvi (2016: 10) defined an element as a single entity of a given population that cannot be decomposed further. Examples of elements include an individual, household, factory, marketplace or school. The element depends on the nature of the population and the population depends on the nature of the research problem. Leavy (2017:76)

emphasised that the researcher determines the sampling frame once he/she identifies the element of interest and the population. The target population is a group of elements from which one draws his/her sample.

The researcher selected only detectives that dealt with gender-based violence which included rape and murder of women and children in Pretoria Central, Mamelodi East Police Station, Sunnyside, Pretoria North and Arcadia forensic laboratory as a target population. Sunnyside and Arcadia laboratories were excused from the study and Pretoria North SAPS informed the researcher that their offices that dealt with GBV cases were at Ga-Rankuwa SAPS, therefore, the researcher added Ga-Rankuwa using the information provided by the gatekeeper. The reason for the proposed targeted stations is that the researcher resides and works around Pretoria and would therefore not be challenged by having to access the required information, but approval was not granted for the forensic laboratory.

## **1.15 DATA COLLECTION**

According to Phillips and Stawarski (2008:69), data are collected using a variety of techniques, although surveys and questionnaires are most often used, due to their cost-effectiveness and convenience. Saldana (2011:64) mentioned that a variety of methods can be used to collect reaction data. Data collection instruments range from simple surveys to comprehensive interviews. The appropriate method depends on the type of data needed (qualitative or quantitative), the convenience of the method for potential respondents, the culture of the organisation and the cost.

### **1.15.1 Interviews**

An interview involves asking a series of questions to draw information from a respondent (Davies, Francis and Jupp, 2011:103). Typically, interviews represent a conversation between people. Saldana (2011:75) mentioned that interviews are the most common form of data gathering in qualitative research studies, perhaps because they directly solicit the perspectives of the people we wish to study. The formats of the interview range from highly structured interviews consisting of a set of prepared and specific questions to be

asked in a particular order for each participant, to unstructured interviews consisting of a general list of topics for possible exploration (Saldana; 2011:33).

Dantzker, Hunter and Quinn (2018:106) state that interviewing involves asking questions to individuals to get information. If an interview consists of specific questions with designated responses and numerical values assigned to the responses, they qualify as quantitative research questions. Furthermore, a thorough interview is a form of self-report that is a relatively simple data collection approach. A thorough interview can produce a wealth of information. An interview can cover a number of content areas, is relatively inexpensive and is an efficient way to collect a wide variety of data that does not require statistical analysis (Marczyk, De Matteo & Festinger, 2005:117). Face-to-face and telephone interviews were selected as data collection instruments in this study.

### **1.15.2 Structured Interviews**

Structured interview schedules with open questions can be used as the interviewer poses the questions, follows up with additional probes, bridges, silences, and records answers. The presence of a well-trained interviewer also enables the researcher to use a variety of measurements besides simple question-answer sequences (Alasuutari, Bickman and Brannen, 2008:314). The researcher used structured interviews and telephone interviews with the few participants who were deployed to another province for work purposes. Furthermore, the researcher registered during COVID-19 during that period students had to comply with the COVID-19 regulations and policies around the country. Telephone interviews were selected to collect data to avoid being in contact with participants due to the strict measures associated with the lockdown but before the researcher began with data collection, the lockdown levels were adjusted from level 5 to 1. Some of the participants offered the researcher an opportunity to conduct structured interviews due to their availability while for some participants, it was because they were not comfortable with telephone interviews.

### **1.15.3 Semi-Structured Interviews**

According to Lapan, Quartaroli and Riemer (2012:90), semi-structured interviews are used to collect similar information from a larger sample of individuals, numbering at least twelve to fifteen and usually not more than ninety. Jamshed (2014) states that semi-



structured interviews are in-depth interviews where respondents answer pre-set open-ended questions. They are widely employed by different healthcare professionals in their research. Furthermore, by in-depth interviewing, we mean face-to-face encounters between the researcher and informants directed toward understanding informants' perspectives on their lives, experiences or situations as expressed in their own words (Taylor, Bogdan & De Vault, 2016:102). The researcher thinks that it was unnecessary to select this kind of method since the sample would comprise a very small number of participants.

#### **1.15.4 Qualitative Questionnaire**

According to Maxfield and Babbie (2011:264), a questionnaire must be properly laid out and the wording of the questions must be clear to avoid the respondents' missing questions, confusing them about the nature of the expected answers and avoiding answering the questionnaire altogether.

Sapsford and Jupp (2006: 93) state that most people are familiar with qualitative questionnaires because they are widely used to collect market information. The respondents are asked to read the questions and to answer them either by circling or ticking one of the answers or to write their free response answers. Information about attitudes, knowledge, opinions, expectations, experiences and the behaviour of patients and care is gathered. A qualitative questionnaire is relatively easy to implement and does not normally burden respondents. Properly designed questionnaires may deliver relevant information to researchers (Szechenyi, 2015).

The researcher formulated a qualitative questionnaire that contained the same and simple structure, understandable questions that made it simple for the participants to respond. All the respondents answered the same questions about the research topic. Furthermore, the researcher never intended to help them with their responses.

#### **1.16 DATA ANALYSIS METHOD**

Data analysis is a sequence of steps to make informed conclusions from the data collected for the study (Peck & Devore, 2012:6). Leavy (2017:130) highlighted that data analysis methods allow the researcher to get results that can be presented as the findings

of the study. Kumar (2011:210) emphasised that a researcher must specify whether they will use manual methods or computer-based methods to analyse the data. For computer-based analysis, the researcher identifies a program and the statistical method he/she intends to use on the data. The researcher should identify the main variables for analysis when carrying out quantitative studies. In qualitative studies, Researchers who are carrying out qualitative studies should show how they will analyse interviews or observation notes.

In addition, the purpose and outcome of data analysis are revealed to others through fresh insights into what was observed and discovered about a situation (Saldana, 2011:98). In this study, the interviews were analysed manually and presented through thematic analysis. Participants' responses were verbally quoted, recorded using a questionnaire, and a cellphone recording device and presented without any alteration by the researcher.

### **1.17 DATA INTERPRETATION**

Data interpretation refers to review of data to make an informed conclusion (Lebied, 2018). Meaning to the information analysed and determines its signification and implications. Creswell (2009:211) mentioned that a researcher gets meaning from results through interpretation. The derived meaning can result in learning lessons and generating new information to compare with existing literature or personal experiences. Moreover, research findings are interpreted within the context and are subjected to the limitations of the available data. When findings are interpreted to mean more than they do, the researcher has twisted his or her findings (Withrow, 2014:39).

### **1.18 TRUSTWORTHINESS OF THE STUDY**

According to Connelly (2016), the trustworthiness or rigour of a study refers to the degree of confidence in data, interpretation, and methods used to ensure the quality of a study. Furthermore, it is important to evaluate how well categories cover the data and identify whether there are similarities or differences between categories to ensure the trustworthiness and credibility of the results (Satu & Kaarianen, 2014:7).

Korstjens and Moser (2018:23) explained Conformability, Credibility, Dependability, Transferability and Triangulation as follows:

### **1.18.1 Confirmability**

Confirmability is the extent to which the findings of a study can be confirmed by other researchers. Confirmability establishes that data and interpretation of findings are not derived from data and facts.

### **1.18.2 Credibility**

The confidence that can be attached research findings is called credibility. Credibility establishes the plausibility of research findings based on whether they are based on the participants' original data and the correct interpretation of the participants' data.

### **1.18.3 Dependability**

Dependability is the stability of findings over time. It involves the participants' evaluation of the findings, interpretation and recommendations. The findings, interpretation and recommendations should be supported by data as received from participants of the study.

### **1.18.4 Transferability**

Refers to the extent to which the results of a qualitative study can be generalised other contexts with another set of respondents. The researcher facilitates through the thick description.

### **1.18.5 Triangulation**

Triangulation enhances qualitative research by using multiple approaches. Triangulation was used in this study by using different data collection methods such namely in-depth interviews, focus group discussions and field notes.

## **1.19 ETHICAL CONSIDERATIONS**

Creswell (2014:114) explained that it is important for a researcher to have a general outline of the topics. The outline differs depending on approach a researcher is using that can either be quantitative, qualitative or mixed methods. Furthermore, a researcher has to ensure a consistent and highly readable proposal through good writing practices. Ethical issues are critically important in research today. Ethical issues should be considered in qualitative, quantitative and mixed methods studies and all steps of a research (Creswell, 2014:132).

### **1.19.1 Voluntary Participation and Informed Consent**

Researchers should get consent from participants before collecting information from them (Withrow, 2014: 55). The participants should voluntarily give consent meaning that they must be completely free to participate without intimidation. The researcher must inform the participants about the scope of the research and any risks associated with participation in the research. The researcher informed all the detectives in various stations around the Pretoria area that their participation was voluntary. They were informed about the potential risks associated with the research so that they could make their own choice to participate or refuse to be part of the study.

### **1.19.2 Confidentiality and Anonymity**

Confidentiality means that a researcher does not disclose their identity of the participants to others. Anonymity means that no one including the researcher does not know the identity of the participants (Korstjens & Moser, 2018). The researcher thinks that to get accurate results, participants must trust the researcher that their names will not be revealed. Since the participants have a right to privacy, the researcher treated all participants with respect by not exposing them and being confidential.

### **1.19.3 Securing the Data**

According to Naimpally, O'Toole, Feeney & Heard (2018), data security is critical to protect confidential data, respect the privacy of the research subjects and comply with applicable protocols and requirements. The researcher thinks that securing data in research is very important since it can put the lives of the participants at risk or even cause them to lose their jobs. To protect data, the names of all the respondents were not mentioned, rather, participants were mentioned by using numbers. Furthermore, access was controlled. This means that information would not be available to anyone; it would be only available to those who want to use it for an intended purpose. Also, participants would have a right to access their data at any time.

### **1.19.4 No Harm to Participants**

Withrow (2014:52) states that the principle of "no harm" means that the researcher should never do anything that can hurt or endanger any other person during the research process, including the researcher. The researcher would like to state that the purpose of

this research was never about hurting anyone, so the participants remain anonymous, and the data collected from the participants were kept confidential. Furthermore, the participants were not deceived in any way. They willingly volunteered without being influenced or threatened by anyone.

### **1.19.5 Ethical Reviews**

According to Biggs (2010:43), the review process therefore always involves weighing the risk of potential harm to the welfare of the research participant against the possible benefits to society more broadly. Balancing competing moral interests is an imprecise calculation, particularly in situations where the potential harm is great or the potential benefit speculative. The researcher always ensured that the participants' rights privacy and confidentiality were respected all the time.

## **1.20 STRUCTURE OF THE RESEARCH**

### **CHAPTER ONE: GENERAL INTRODUCTION**

This study focuses on the introduction, rationale, aim and purpose and objectives the objectives of the study. The research question, limitations and delimitations of the study and literature review are also included in this chapter.

### **CHAPTER TWO: LITERATURE REVIEW**

This chapter focuses on identification methods used to investigate crime and crime scene management including collecting and securing evidence obtained from a crime scene.

### **CHAPTER THREE: FORENSIC INVESTIGATION AND IDENTIFICATION**

This chapter describes and explains forensic investigation, criminal investigation, the value of investigation, the difference between identification and individualisation and the value of identification and further focuses on the rights of a victim.

### **CHAPTER FOUR: FORENSIC IDENTIFICATION TECHNIQUES**

This chapter focuses on the various techniques of forensic identification that are used to identify a perpetrator. Techniques such as eyewitness, fingerprint analysis, DNA,

Identification Parade, voice recognition, and facial identification. It explains how these methods are used and if correct procedures are followed when applying them.

#### **CHAPTER FIVE: GENDER-BASED VIOLENCE**

This chapter describes the nature of gender-based violence in South Africa, and how it has affected the society as a whole. Also, it evaluates if and how South African police respond towards the problem.

#### **CHAPTER SIX: RESULTS AND DISCUSSION**

The results of the study were based on the data gathered using the collection methods that were used in the study. The data was gathered utilizing a cell phone audio recording and structured interviews that had been downloaded solely for the research. Also, it involved taking notes.

#### **CHAPTER SEVEN: CONCLUSION AND RECOMMENDATIONS**

The purpose of this study involved discussing the recommendations based on the findings of the research. The research was conducted to evaluate and explore the forensic identification techniques that are used within our South African Police Service and recommend alternative methods which would enhance the performance of criminal investigators in solving cases of gender-based violence.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 INTRODUCTION**

There is a common misconception that every crime can be solved, and that the perpetrator always leaves traces at the crime scene that inevitably lead to his or her door (Dutelle & Becker, 2019:16). To successfully identify suspects in an investigation, law enforcement officers must value the crime scene in general because a crime scene holds the material that can be used to prosecute a suspect in court successfully. Many criminals escape prosecution because of how cases are handled by law enforcement agencies from the start. A case begins where the crime occurred because the biological and physical evidence that originates from the scene is tested at forensic laboratories. If the evidence matches the suspect, it would be difficult for them to deny their DNA evidence that originated from the crime scene.

To delve more into forensic identification techniques, it is important to define crime scene management. The officials involved in a crime scene need to know what is expected from them. To know their roles and act accordingly without acting in a way that could lead to important evidence about the suspect being confused with that found in the crime scene. The forensic identification technique becomes a very difficult process when poor quality and/or poorly handled evidence obtained from a crime scene is linked to a suspect.

This chapter further focuses on explaining the categories of crime scenes, their objectives, securing it, crime scene sketching and photography and further highlights the role of players in a crime scene.

### **2.2 THE MEANING OF A CRIME SCENE**

The researcher would like to first define crime before further exploring a crime scene. Crime is breaking the law thereby making someone answerable to reprimand by the law. Crimes are made up of elements of criminal law breaking and the criminal elements are broken down into subcategories. In addition, scenes of a criminal event can generate a variety of crime scenes (Dutelle, 2021:04). A crime scene is thought of as the location at which a crime is committed. However, a single crime has numerous associated locations (Dutelle 2021:10). The location, victims, offenders, witnesses, transport, and deposition sites all present crime scenes. Initial attenders should endeavour to preserve crime

scenes to provide the best opportunity for harvesting useful material. Controlling access to locations and preventing contamination creates an environment to give any future forensic results reliability (Stainton & Ewin, 2022:24). Testing samples forensic laboratory depends on proper definition of the crime scene. A crime scene is the main focus of a forensic investigation. The forensic investigation starts at the crime scene and all subsequent analyses are based on it (Houck & Siegel, 2015:24).

Mozayani & Fisher (2018:01) posit that the first step of a forensic investigation process is a crime scene investigation. The proper handling of a crime scene ensures the quality and amount of information available for the investigation. Hence, it guarantees the value of information available as evidence in court. Moreover, since all scenes differ, the actions taken by investigators at a crime scene are flexible. However, some basic rules and guidelines govern the actions of the investigator at a scene (Lochner & Zinn, 2015: 33). A scene of crime can be large or small, wide or distinct, in several places or in one place. Once investigators clearly define the nature and extent of a crime scene, the first responder develops an overview and make a plan of action for the investigation (Houck & Siegel, 2015:27).

If a suspicious death occurs, a detailed check of the scene and the body can solve the case (Moorthy, 2020:99). The investigator must develop a technique to confirm if a stain identified is a bloodstain. Bloodstains may appear similar in colour to other substances when visual cues are used (Zulfair, Ahmad, Sohaib, Mazzara & Distefano, 2021:02).

### **2.2.1 Categories of Crime Scenes**

Mozayani and Fisher (2018) further state that a crime scene may be a primary location where the main offence occurred or a secondary location such as a vehicle, house or any object that can produce physical evidence that is valuable to an investigation. Anything taken from a scene should be instrumental in discovering the facts. Importantly, evidence reveals the facts. If evidence is inconsistent with a hypothesis, the evidence must not be changed to fit to the hypothesis but rather the hypothesis be changed to fit the evidence (Dutelle & Becker, 2019:67). Despite the variation in crime scenes, there are guidelines that serve as a framework for the processing all cases. These guidelines may overlap and therefore they are not separate from one another (Dutelle & Becker, 2019: 69). A



crime scene can be complex and may involve many sites and victims (Osterburg & Ward, 2019:85).

### 2.2.2 The Primary Crime Scene

A primary scene is defined as an area near the incident and where much of the physical evidence is found (Lochner & Zinn, 2015:35). It is the traditional staged scene, wherein the intent or motive of the offender is to misdirect a police investigation away from the fact of the crime (Graham, 2017:26). Figure 2.1 indicates a clear illustration of a primary crime scene, the materials available on the scene indicate that a violent incident took place, but the victim or suspect is not available on the scene. Under such circumstances, it is only physical and biological evidence can be used to identify the individuals that were involved. This scene led to another event after the identification of physical and biological evidence that is available in the scene. The items available on the scene include footprints, a weapon that contains blood stains, different bottles of alcoholic drinks and a plate and spoon that can also be tested at the forensic lab.



Figure 2.1 Primary crime scene of a missing female (Researcher's own work)

The items or materials that are involved in a crime scene also determine the lifestyle of the perpetrator as well as the activities that would have happened before the occurrence of the violence. Bell (2019:324) highlighted that investigators must get detailed information on the life and lifestyle of crime victims to get a better understanding a crime scene as this defines the analysis of the crime from a particular perspective. Failure to

solve violent crime mainly caused by an incomplete understanding of the lifestyle of the crime victim.

### 2.2.3 The Secondary Crime Scene

The secondary crime scene is any location where there may be evidence of criminal activity outside the primary crime scene (Moorthy, 2020:99). It is an offender's misdirection of a police investigation and is instead based on the offender's own needs. The scene alterations observed are not an attempt to mislead in as much as they are fulfilling some offender's fantasy or psychological component (Graham, 2017:26). An illustration in Figure 2.2 points out a vehicle of a missing female that was abandoned in an isolated area to mislead law enforcement authorities not to obtain full details about the criminal events.

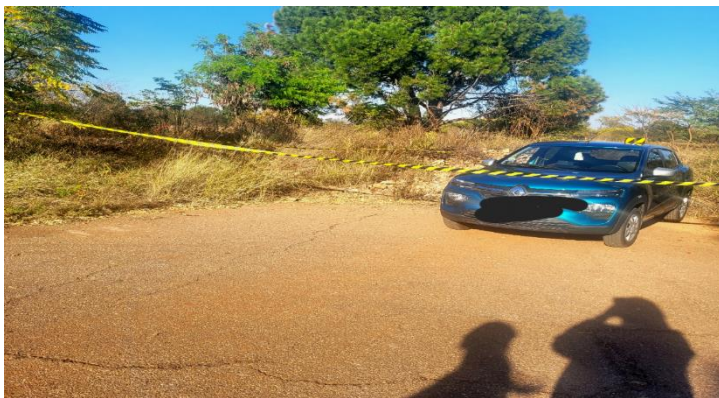


Figure 2.1 an abandoned vehicle of victims in an isolated location (Researchers own work)



Figure 2.3 A heavily stabbed deceased body of a missing female on her car boot (researcher's own work)

A secondary crime scene can be a location that is distant from a primary scene. An example of a secondary scene is a vehicle used to transport the remains of a victim of

murder to another area (Lochner & Zinn, 2015:35). Offenders are capable of doing anything to escape the law, as the technology revamps they also upgrade with new ways of committing a crime and get away with it. They always have their thoughts about how other people might perceive the incident. Figure 2.3 is an illustration of the deceased body of a female who went missing after being engaged in a fight with her partner, the victim was discovered at the back of her vehicle covered with blood.

### **2.3 MANAGEMENT OF A CRIME SCENE**

Management of a crime scene starts when an investigator responds to all calls. When an investigator arrives at the crime scene, he/she determines the status of the scene of the incident. The official ought to make the area secure and share information available with other officials who attend the incident scene. The officials include the investigating officer who for examines the scene of the incident (Lochner & Zinn, 2015:09). Crime scenes that are not managed appropriately tend to lose evidence or get low quality evidence. Poor quality evidence can cause in erroneous exonerations or convictions in the criminal justice system (Mateen & Tariq, 2019:285). Scene security is mostly important to successful management of evidence at a crime scene. The responding law enforcement officers must secure persons at the scene and the scene itself after ensuring that there are no immediate threats and providing emergency care (Mozayani & Fisher, 2018:02). Crime scene processing ensures active and successful criminal investigations. Crime scene investigations deal primarily with the identification, collection, proper packaging, transport and analysis of evidence material for forensic analysis (Mateen & Tariq, 2019:285). According to the researcher, a crime scene ought to include all of the evidence necessary to prosecute suspects. Investigators rely heavily on crime scene management that is, an investigator must understand how to manage and secure a crime scene to gather trustworthy evidence.

Investigators must properly handle the crime scene to ensure a successful criminal investigation. This ensures the successful collection, detection and analysis of evidence. A procedural search and analysis of traces from a scene of crime make them valuable for successful convictions (Zulfiqar, Ahmad, Sohaib, Mazzara, & Distefano, 2021:2). An investigator needs to pay attention to the questions posed by the scene where police

response occurs. The most important ten questions to consider according to (Reilly 2019:159) are the following:

- ✓ Is this a scene of crime?
- ✓ Is it the only crime scene?
- ✓ Is it likely that this scene was merely a location where the remains of a homicide victim were dumped?
- ✓ Are the obvious parameters of the scene correct or should the scene be expanded?
- ✓ Is the scene fresh enough to consider that it is exactly how the perpetrator left it, or is it likely to have been compromised by other persons, environmental factors, or the passage of time?
- ✓ Does the crime scene have enough visual proof that allows the investigator to believe there is more than one venue that may yield additional physical evidence and insight into how the crime happened?
- ✓ Does the scene exhibit chaos?
- ✓ Does the scene exhibit order?
- ✓ Which physical evidence is left at the scene that provides answers and does it simply add to the questions to be answered?

The victim represents a specific crime scene and, as such, a wealth of material from forensic to verbal accounts is available. Sensitivity is paramount, an investigator may be used to the restrictions of crime scene management, but the victim, their friends, and family tend to prioritise support over any contamination issues (Stainton, Ewin, Brockley, 2022). According to Lochner and Zinn (2015:10), the important rules of crime scene management are never:

- touch anything.
- change anything.
- remove or add anything.

It is important to adhere to these important rules until the evidence has been identified, measured, documented and photographed.

Managing a crime scene is the most challenging part because this is when the civilians want to participate and unknowingly disturb the evidence available at scene. Managing a crime scene necessitates a certain skill, for instance, in scene. With a deceased unidentified individual, most people want to be involved before the first responders because they want to identify the victim and learn if it is a sibling, friend or someone they know.

### **2.3.1 Purposes of a Crime Scene Investigation**

The main purpose of crime scene investigation is to fix and get traces created by the perpetrator and the resources and tools used as well as clarify the circumstances in which a crime would have been committed (Avramescu, 2021:164). At all steps of the investigation all investigators involved are obliged to the truth. All personnel involved in processing the crime scene must be conscious of not simply collecting evidence to prove what they believe happened but be open to the evidence. Also, investigators must handle the crime scene investigation as if it was their only opportunity to preserve and recover physical clues from the scene (Dutelle 2014:06). According to Fish, Miller, Wallace, and Braswell (2015:61), the main objectives of a crime scene investigation are to:

1. Recreate the incident.
2. Establish the sequence of the events.
3. Determine the method of operation (modus operandi).
4. Reveal the motive.
5. Unearth what properly was stolen and from where.
6. Determine what the perpetrator may have done before, during and after the event.
7. Identify, document, collect, and preserve physical evidence of the crime.

The crime scene is most of the time the starting point of forensic investigation, thus it is the most important place for the criminal investigation. Visible or latent traces of criminals or victims that are left intentionally or through negligence or ignorance are found at the scene (Avramescu, 2021:164). Proper collection of evidence is one of the most important

components of a criminal investigation and prosecution physical and biological evidence may link a suspect to a crime or prove someone's innocence (Fish, Miller, Wallace & Braswell, 2015:04).

The CSI makes sure that the scene of the crime is properly controlled by ensuring that no unauthorized people enter the crime scene while maintaining order and ensuring that the available evidence is not tempered, removed or even destroyed. The CSI also ensures that indications found at a scene can be linked to the correct perpetrator. If the perpetrator is available at the scene, they must be handed to the nearest police station for further questioning.

### **2.3.2 Securing a Scene of Crime**

The preservation of a scene of crime is one key technique of crime scene management (Farajih, Hendiani, Fakharz & Hamidzade, 2016:1). First responders must always have PPE (gloves, face shields, coveralls, and hair covers), cameras, spray paint, some search forms, flashlights, a crime scene tape, evidence markers, a first aid kit, paper bags, measuring devices and bodily fluid collection kit in their possession. Mirakovits and Gina (2016:15) contemplate that it is important to understand how certain items should be collected and packaged during the collection and preservation processes. Wet items must not be placed in plastic bags because they can be contaminated by moulding and bacterial growth.

Mateen & Tariq (2019:285) state that setting a scene perimeter and controlling scene access are necessary to safeguard scene integrity, preserve evidence and minimise contamination. Small items should be placed in small containers. Fire rubble evidence must be placed in airtight cans. The storage container should be sealed with tamper-proof evidence tape (Mirakovits & Gina, 2016:15).

The researcher thinks that securing the scene of crime is done by the officer who arrives at the scene first. This officer must ensure that he/she controls the scene to avoid destruction of important. In addition, similar to other crime scenes, a sexual assault crime scene must be secured. A sexual assault crime scene must be secured until the medical examination of the victim since additional evidence may be indicated by facts discovered during a medical examination (Ogle & Plotkin, 2018:267). Non-essential personnel

including police officers, investigators, fire department personnel, witnesses, victims' relatives, neighbours, bystanders or members of the news media must be restricted from the crime scene (Miller, 2018:27).

### **2.3.3 Searching the Crime Scene**

According to Mateen & Tariq (2019:286), information collected from crime scenes helpful in building future security models. Some examples from the past are evidence that proper crime scene investigation may also help judicial procedures to prevent wrongful convictions. Evidence collected from a crime scene is used in the identification and individualisation of a suspect. The researchers further highlight that searching for evidence at a scene necessitates a high level of the potential crime scene. Investigators are looking for any potential type of evidence, which could be biological or physical evidence left by the suspect. The main part of the investigation is observing and searching the crime scene because, without evidence, the case would likely be dismissed in court.

Typically, crime scene investigators conduct searches because they are fully trained on how to search for, collect, and handle evidence obtained from the scene. Bowen (2018:33) emphasised that investigators need to be composed, procedural and record all information before sending evidence to a laboratory. This ensures the preservation and collection of evidence that guides the investigation. Investigators have to avoid mistakes since simple mistakes may damage an entire investigation. However, crime scene safety is important for the investigator's safety and protecting the integrity of the evidence. Never use bare hands when searching for evidence. Investigators must always wear special protective gloves, for example, Kevlar-coated gloves when they are searching areas that are not directly visible such as under furniture (Suboch, 2016:144).

Several methods are used to search the scene of the crime logically. Scientific procedures make the process meticulous. The method selected for the investigation is influenced by the size, number of scenes, type of crime scene and how many officers are available for the search (Ogle & Plotkin, 2018:45). The following methods (Table 1) are explained by Dutelle (2014:94).

Table 1: Crime Scene Search Methods

Search Methods	Descriptions
Strip	The scene is broken up into manageable lanes in which the searchers move back and forth with slight overlap. This is similar to the way someone mows lawn.
Line	Searchers gather in a line that runs along a selected edge of the crime scene. Searchers stand side by side and spread apart, leaving a manageable distance between each person. A search coordinator should be in the middle of this line to make sure that everyone moves forward as straight as possible.
Grid	A lane is searched in one direction, similar to line search. Then as the lane ends, the direction is at a 90-degree angle to search another lane.
Zone	The zone search is usually used in an area that is already divided into manageable zones. It is mostly used indoors, but is sometimes used outdoors if the areas are divided into demarcated zones. The zones can be searched independently and different search personnel can later research to safeguard that no evidence has been unnoticed.
Spiral	Searchers can either start at a defined outer boundary and circle or spiral toward the defined critical point or else they can begin at the critical point and circle or spiral outward toward the crime scene perimeter.

Source: Researcher

### 2.3.4 Crime Scene Sketching

According to Suboch (2016:12), a crime scene sketch shows how the crime scene was arranged. The location of the scene sketch and physical evidence are logged. The prosecutor introduces a crime scene sketch to visually prove the connection between the location of the physical evidence and the victim. Girard (2021:08) mentioned that a sketch is used to accurately record distances between objects at the scene. Investigators use sketches to stress the most relevant objects and features thereby eliminating irrelevant details. Normally, researchers believe that in a criminal investigation, there are two types of sketches; those made by forensic investigators at the crime scene, roughly drawing all the events and significant information, and those made from the testimony of witnesses or victims. They all matter because they provide detailed information on what would have transpired. Jackson and Jackson (2017:36) define crime scene sketching as drawing crucial objects of a scene of crime, their dimensions and spatial orientations. The process starts with a rough crime scene sketch that is further developed into a finished sketch.



Saferstein (2018:37) explained the crime scene investigator sketches the scene after photographs have been taken. The sketch serves many important purposes in a legal investigation of a crime. An appropriately drawn sketch clearly shows the arrangement of a crime scene, connection in space between all items and features substantial to the investigation. A sketch is done if an object has to be moved before it can be photographed and where dimensions are vital to the case (Jackson & Jackson, 2017:36).

By following the standardized process at every type of crime scene, the CSI may be assured that every step is performed methodically, which simplifies court testimony. According to Fish et al., (2015:35) the following is the 12-step process of a crime scene investigation:

1. Prepare
2. Approach scene
3. Secure and protect the scene
4. Initial preliminary survey
5. Evaluate physical evidence possibilities
6. Prepare narrative descriptions
7. Depict the scene photographically
8. Prepare diagrams and sketches of the scene
9. Conduct a detailed search
10. Record and collect physical evidence
11. Conduct a final survey
12. Release scene

An investigator should show potential physical evidence to medical personnel or firefighters who may still be inside the scene. Furthermore, they should be sure to document emergency responders (names, badges, numbers, and station assignments) who would likely be inside the crime scene. Lastly, they ought to instruct them not to clean up the scene (Fish et al., 2015:35).

### 2.3.5 Crime Scene Photography

A stable camera provides good photography for both standard and digital cameras (Gardner & Krouskup, 2019:140). Taking pictures of the crime scene should begin as soon as the scene is identified. A photographic log is used to record all the pictures taken, their description and the location of what is captured on the picture (Houck & Siegel, 2015:30). Crime scene photographs help establish the *corpus delicti* and reproduce the scene. Photographs can be used to verify the story of a witness or a suspect. Does a witness or suspect's account of a crime correspond to the condition and arrangement of objects, furniture, doors or windows depicted in the crime scene photographs? Photographs refresh investigators' memories, reconstruct a crime scene and reduce the need to handle physical evidence (Woods, 2019:49).

Crime scene pictures are used to enhance the understanding of the scene and investigative description. They must explicitly capture the arrangement of the overall scene i.e., the location, orientation, spatial connection of different areas in the scene to one another and the various items of evidence found in the scene (Gardner & Krouskup, 2019:113). Crime scene pictures should be taken directly at right angles to remove distance distortion for a clear vision (Fatima, 2019:20). According to Woods (2019:49), the purpose of crime scene photography is to:

- a) provide a lasting record of how the crime scene appeared shortly after the crime was committed before objects of evidence were moved or disturbed.
- b) understand the crime.

Verbal descriptions of the crime scene are more understandable when illustrated with photographs. Photos help those who have not visited the scene to understand the crime better.

- c) investigate the crime.

Crime scene photographs help establish the *corpus delicti* and reproduce the scene. Photographs can be used to verify the story of a witness or a suspect. The story of a witness's or suspect's account of a crime corresponds to the condition and arrangement

of objects, furniture, doors or windows depicted in the crime scene photographs. photographs refresh investigators' memories, reconstruct a crime and reduce the need to handle physical evidence.

The researcher asserts that to obtain excellent images, photographers should do the following. First, they need to ensure that they take as many images of the location of the crime as possible. Second, they should keep track of images taken from the crime scene, including information and footage limits used. Third, they need to take images from an array of spots, and the camera must be of excellent quality, alongside flashlights so that the images are clearer. Fourth, the photographer should not just be any regular person, meaning, images must be taken by officials who are specifically trained by forensics on how to capture different crime scenes that can assist in the investigation. There is also special equipment that is used by forensic photographers including a photographing kit. Moreover, forensic photography kits vary according to crime scene or laboratory protocols. Most of the photography kits have a basic camera or even several cameras, electronic flashes, different light source filters, numerous lenses for close-up shots, midrange or wide range angles, a tripod, cable release ruler, a grey index card and protection from rain, cold and heat exposure (Fatima, 2019:22).

## **2.4 ROLE PLAYERS IN THE CRIME SCENE**

The most important people who are always available in a crime scene would first be the person(s) who report the crime (complainant) followed by the first person who responds to a call, usually the detectives, sergeants, or constables. It depends on whether a crime would have been committed with the use of a weapon, should it happen that a weapon such as a gun was involved, then it would be necessary for the first responders to involve ballistics investigators so that they can identify the type of a gun and whether it can be linked to a suspect. If the victim was raped, a forensic nurse and forensic psychologist must be involved. Furthermore, there are many integral components of (and people involved within) a criminal investigation that ought to be considered for such criminal cases to be prosecuted successfully. It is required that all the components be supportive of the other, and none can stand alone or be seen as being more important than any of the others. The first tier of the investigative process begins with the first responder

(Dutelle, 2021:5). The crime scene investigator plays a central role on a team that includes a lead detective, medical examiner, prosecution office and forensic scientists at the crime laboratory (Fish et al., 2015:2).

#### **2.4.1 The First Responder**

Usually, first responders are the police officials (SAPS). They respond to a call made by a complainant; a complainant can be a victim or any other person who witnessed or encountered an incident of crime. Then, police officials urgently rush to a scene to establish if a crime of sexual assault, assault or even murder has indeed occurred before further contacting other emergency agencies and crime scene specialists. In addition, upon arrival, police officers establish if a crime has been committed before performing lifesaving measures and conduct a protective sweep of the scene to ensure that it is safe and no suspect is hiding there (Suboch, 2016:103).

The first responder must determine if suspects are still in the area upon arriving at a crime scene. If suspects are present, they must be arrested or controlled (Osterburg & Ward, 2019:36). The presence of first responders, law enforcement, fire or rescue teams, emergency medical services and multiple jurisdictions agencies has an impact on scene order. Thus, scene safety, deciding who has primary responsibility, the scene parameters and protecting physical evidence are the primary concerns during the initial stages (Maloney & Housman, 2014:4). The actions of the first responder and emergency responders at the scene before the arrival of the CSI must be recorded and shared with detectives and other investigators as the crime scene investigation progresses (Fish et al., 2015:3). Law enforcement's first responders must determine who would have entered the scene of crime and all actions taken including the items they may have touched or disturbed. It is not unexpected for first responders to touch items within the scene. Lights may be turned on, a weapon may be secured, and doors opened or closed to ensure changes are noted (Maloney & Housman, 2014:6).

#### **2.4.2 Crime Scene Investigators**

Crime scene investigators (CSI) play a central role on the team that includes the lead detective, medical examiner, prosecutor and forensic scientists. The crucial role played by a CSI depends on the type of physical or biological evidence and the examinations

that are performed, several scientists and technicians may be involved in the analysis of the evidence (Fish et al., 2015:3). The CSI is not usually the first person at a crime scene. In most cases, civilians, emergency medical personnel, firefighters and law enforcement officers usually arrive at crime scenes first. Most first responders work on instinct at the scene. Their tasks are to save lives or apprehend suspects (Miller & Massey, 2019:17).

CSIs are responsible for two of the four steps in the four steps in the admissibility of physical and biological evidence for consideration by the court. The knowledge, skills, and abilities of CSI are invaluable to the determination of facts (Fish et al., 2015:4). CSIs can be experts in one or more forensic disciplines that include DNA analysis, bloodstain pattern analysis, toxicology, chemistry and impression evidence (Suboch, 2016:1).

#### **2.4.3 Emergency Services and Forensic Nurse**

In cases where the crime involves assault and other violent actions that lead to the victim getting life-threatening injuries, emergency services must be present to provide emergency treatment while transporting the victim to a hospital for further treatment. Osterburg and Ward (2019:43) support this view by highlighting that aid ought to be rendered to anyone who is injured, and the perimeter of the scene should be determined and secured. The researcher further states that in a case where sexual assault is involved, it is vital that the victim be urgently transported to the nearest hospital for further assessment, treatment, and collection of evidence on their body by relevant professionals such as forensic nurses. In addition, a forensic nurse is a licensed nurse who has specialized training in proper collection of evidence. The skills of forensic nurses are mostly utilized in sexual assault investigations. Such nurses usually are certified sexual assault examiners (Dutelle, 2014:93). A sexual assault examination is detailed, labour-intensive and takes several hours to complete. Most patients that report acute sexual-related injuries (within 96 hours) are treated in emergency departments (Mozayani & Fisher, 2018: 47).

In a case where fire is involved in a crime scene, firefighters must be present to help extinguish the fire, which can cause further damage to the property or the life of any other person close by. Some criminals tend to try to destroy evidence by starting fires to destroy evidence, which could result in their prosecution.

### **2.4.5 Forensic Photography**

It is critical to have forensic photography available at a crime scene to digitally record the state of the scene of crime to make it easy for other crime scene technicians to study it and reach into positive conclusion. Forensic photography introduced a new way to produce pictures that are close to reality than sketches. These photographs can record and document the primary state of a crime scene and technically modest enough to be manipulated as they are drastically deviate from reality (Fatima, 2019:20).

## **2.5 SUMMARY**

Crime scene management is the first step of an investigation because, without a crime scene, it would be difficult to determine whether a crime happened. The investigator must know the objectives of the investigation and have more knowledge about the different categories of crime scenes to achieve the goal of properly connecting the indications obtained from a scene of crime to a suspect. The main purpose of an investigation is to reconstruct past events by being systematically guided by procedures and policies that involve securing the scene, tracing evidence and knowledge of different methods that are used to record the crime scene which includes photography and crime scene sketching. Investigators must know the people who are expected to be on the crime scene including their roles and responsibilities.

## **CHAPTER THREE: FORENSIC INVESTIGATION AND IDENTIFICATION**

### **3.1 INTRODUCTION**

Chapter 3 focuses on explaining forensic and criminal investigations. Both have the same goal in the investigation of crime as both methods are used to gather facts, analyse and demonstrate that a crime occurred. Forensic investigation and criminal investigation have one purpose, which is to trace, identify, and prove. Criminal investigation and forensic science are both motivated by establishing the truth (Hess & Orthmann, 2017:08). Although touch DNA is science, its use is not without perils, and it is not infallible. Science can be misapplied, misinterpreted, and misunderstood by investigators, jurors, and others.

Forensic investigation plays an important role in fighting gender-based violence cases by aiding criminal investigations through to identifying suspects. For instance, serial rapists can be linked to victims by forensic specialists through the use of special forensic identification techniques. This happens by scientifically linking evidence collected from the scene of a suspect using special identification techniques. The goals of criminal investigation and the differences between identification and individualisation as well as the value of identification and the victims' rights are discussed in this chapter.

Since law enforcement is serving the people and has to answer for its actions to the community, law enforcement must follow the path in all investigations to find the truth (Reilly, 2019:1).

### **3.2 FORENSIC INVESTIGATION**

According to the researcher, a forensic investigation tests physical and biological evidence obtained from a crime scene by testing it at a scientific laboratory to establish whether there is a connection between a victim and a suspect. The application of forensic science to investigate a criminal event is called forensic investigation (Dutelle & Becker, 2019:7). Just as with law enforcement, the growth and evolution of the field of forensics have been occurring for thousands of years. Furthermore, forensic science is a combination of laboratory analysis and physical comparison of items linked to victims, perpetrators and crime scenes (Bowers, 2019:34). In addition, the subject to scientific analysis in the forensic procedures "forensic science" includes effective identification,

documentation (collecting notes, pictures, sketches and videos of the crime scene) and gathering and preserving physical and biological evidence at the crime scene. The evidence is subjected to scientific analysis in a forensic laboratory. The results of the examinations produce forensic evidence for consideration by courts. The evidence should be presented as proof that a crime was committed and that is the identity of the perpetrator (Saini & Kapoor, 2016:1). Forensic science is based on the guiding principles of the profession. Forensic scientists must be technically competent and use reliable analysis methods. In addition, scientists must be honest with their qualifications and limit the tests they do to their specific areas of expertise. Furthermore, scientists must be honest about the scientific data that they base their conclusions and opinions on (Bowen, 2018:20).

A forensic investigation examines evidence scientifically to determine how it can be utilised to apprehend suspects. Different scientific techniques are used to collect indications that can stand in court during an investigation (Zinn & Dintwe, 2015:12).

### **3.2.1 Forensic Investigators**

Forensic investigation is performed by individuals who are trained and have expertise in forensic science. They must have qualifications relevant to criminal justice such as criminology, policing, forensic investigation, accounting/ forensic auditing, physical science, biology, law, chemistry, criminal justice, photography, and so on. These qualifications make it easy for investigators to understand forensic investigation before training as they already have background theory. Moreover, forensic scientists are experts who analyse evidence using scientific procedures to produce vital information. The role of forensic scientists is to contribute information that can be used to solve crimes or catch criminals (Bell, 2019:2). In addition, the researcher emphasises that an investigator plays a central role in crime investigation. Investigators must equip themselves with knowledge of the Constitution of South Africa and the policies that guide their duties to avoid violating the rights of the suspects, witnesses and victims involved in that particular incident. Swanson, Chamelin, Territo & Taylor (2019:43) point out that an investigator must be able to talk well with people ranging from corporate executives to the homeless to get the truth. Much of what is learnt during an investigation comes from



people of all walks of life. In addition, investigators pursue clues provided by physical evidence. The concept identification is premised on the fact that all items have exceptional features (Murnaghan, 2014).

Lochner, Horne and Zinn (2020:19) argue that in the South African context, the government emphasise that an investigator who investigates sexual crimes against children must possess relevant qualifications. The qualities of an official investigating such crimes are highlighted below:

- ✚ Compassion and professionalism.

- ✚ Investigators dealing with crimes in which children are victims must be able to conduct their investigations with compassion, but without sacrificing professionalism. They ought to be able to gain the victims' confidence. This can only be done if the investigators' approach is empathetic and truthful. If it is not, it would likely elicit a positive reaction from the victim which would enable the crime investigator to get the intimate aspects of the victim's experiences.

- ✚ Acting without prejudice

The investigator must not take sides, there must be neutrality not bias the complainant and the suspect both have the right to be treated without prejudice, this includes methods of questioning.

- ✚ Professional appearance

Professionalism must be reflected in the conduct and appearance of officers investigating crimes, particularly those in which the victims are children. Presenting an image of professionalism to the complainant or the witness encourages them to feel that they are important and respected.

- ✚ Gender issues

The choice of an investigating officer must not be narrowly based on gender. The wrong conclusions are drawn if the thinking is that women should only deal with female victims.

Forensic investigators or experts work in laboratories as they are expected to analyse evidence obtained from the scene, the forensic laboratories contain all the resources

including certain chemicals that are used to identify erased evidence in the crime scene. The application of a tool, method or technique to some aspect of the judicial system is common among all forensic disciplines. Forensic science assists law enforcement and criminal prosecution (Bell, 2019:01). Forensic disciplines include the ones shown in Table 2.

**Table 2: Forensic disciplines**

<b>FORENSIC INVESTIGATION DISCIPLINES</b>	<b>DESCRIPTION</b>
Forensic auditing	Forensic Audit, through its preventive measures, looks into the future and utilises implementations for the present. One can generalize, that forensic audit like foresight can be perceived as the overall process of creating an understanding of information generated by looking ahead Dobrowolski (2020:256).
Forensic Computer/ Cyber Forensics	Cyber forensics is the science of examining, analysing a reporting electronic evidence collected from computers, networks, and wireless communication and storage devices. (Husain & Khan 2020:02).
Crime Scene Forensics	Crime Scene Forensics is seized with documenting the scene using appropriate methods, conveying the scene findings to other members of the investigative team and those who were not present on the scene via oral and written reports and testifying in the courtroom (Ogle & Plokkink 2018:37).
Forensic Anthropology	Forensic anthropology involves estimating the sex, ancestry, age and stature of skeletal material from unidentified individuals. This summary of estimated biological parameters is referred to as the biological profile. This profile is compared to missing person's records or other databases in an attempt to generate information that can be used to identify the person to whom the skeletal remains belong. (Christensen, Passalacqua, Bartelink 2019:02).
Forensic Dentistry (odontology)	Forensic dentistry examines, handles and presents dental evidence to aid the decisions of the courts (Manica & Forgie, 2017:522).
Forensic Entomology	Forensic entomology can be utilized to assist the investigator in the recognition of sites of trauma and entomological indicators may provide information on the perimortem or postmortem treatment of human remains. Entomology may also be used to create linkages

	between a suspect, a victim and a crime scene Ogle & Plotkin 2018:358).
Forensic Pathology	Forensic pathology applies medical techniques to solve crime. It used to handle deaths through: <ul style="list-style-type: none"> <li>• determining the cause and manner of death.</li> <li>• identifying the deceased, if known.</li> <li>• determining the time of death and injury.</li> <li>• collecting evidence from the body that can be used to refute or corroborate an account of how the death occurred.</li> <li>• documenting injuries or lack thereof.</li> <li>• deducing how the injuries occurred.</li> <li>• documenting any natural disease present.</li> <li>• determining or excluding other contributory or causative factors to the death.</li> <li>• Provide expert testimony if the case goes to trial Dimaio &amp; Molina (2022:1).</li> </ul>
Forensic Psychology	Forensic psychology refers to professional practice by any psychologist working within any sub-discipline of psychology e.g. clinical, development, social, cognitive). When applying the scientific, technical, or specialized knowledge of psychology to the law to assist in addressing legal, contractual, and administrative matters. (Bartol & Bartol 2018:7).
Forensic Toxicology	Is a field of science dedicated to the application of accepted scientific methods and practices in toxicology to cases and issues where adverse effects of drugs and chemicals on biological systems have administrative or medico-legal consequences, and where the results are likely to be used in court? (Peter, Wissenbach, Busard, Marchei & Pichini, 2017:01).

Source: Researcher

These are some disciplines of forensic investigation in cases related to GBV. A forensic social worker ought to be involved in offering counselling to the victims affected. Forensic psychological services are also offered to victims and perpetrators of GBV because it is important to know the root cause of the problem before making necessary decisions. Forensic psychology is offered especially before the offender is released. He or she must

be assessed to ensure that psychologically, the offender is prepared to re-integrate with society.

### 3.2.3 Forensic Investigation at SAPS

The forensic science component at SAPS is also divided into different components or units more like other general criminal investigations that they have (South African Police Service, 2014). Among the components that are offered by the department include the following:

- **Ballistics Unit-** which according to SAPS focuses on the examination of fire marks and tool marks. The researcher would like to state that South Africa is facing a problem of many citizens that have illegal firearms and unlicensed firearms which are used by criminals to cause havoc in our societies by committing murders using firearms that are very difficult to trace and linked to someone. The ballistic investigators make it possible to link one firearm to different murders by studying and analysing the firearm, and if it qualifies to be called a firearm in terms of the Firearm Act 60 of 2000. If it was previously owned or registered under which name and to determine the firearm type and ammunition that was used during the commission of that crime.
- **The biology Unit-** this unit focuses on examining and analysing evidence of biological origin. It includes analysing body fluids (Semen, Saliva, Sweat, Blood, hair or any other tissue) that lead to its origin. It aims at exposing if the person was present at the crime scene.
- **Question Document Unit-** this unit specialises in handwriting individualisation by comparing the individual writing characteristics present in the writing on a disputed document with those in the sample writing of a specific person. Handwriting experts determine whether a person is the writer of the doubtful document or not. There has to be an clear-cut connection between a person and the doubtful document.
- **Scientific Analysis Unit-** this unit focuses on the identification of a particular object by physically fitting it with another to prove that it is part of the same object.

- **Chemistry Unit-** it focuses on the analysis of forensic drugs. Law enforcement agencies use chemical analysis to investigate drug-related crimes.

The role of all these units is to test evidence collected from the crime scene. Special training is offered by the forensic department at SAPS to train all staff that are recruited especially those working at FSLs, as all forensic scientists must have broad knowledge of how to deal with evidence scientifically.

### **3.4 CRIMINAL INVESTIGATION**

According to Dutelle and Becker (2019:7), the criminal investigation encompasses the use of the scientific methods to analyse a crime scene. The need for field practitioners to understand evidence and information that is obtained from evidence preserved for forensic evaluation increased due to the evolution of policing. This led to the evaluation of forensic investigation and forensic evidence. Furthermore, a criminal investigation is a rebuilding process that uses deductive reasoning and a logical process in which a conclusion is based specific facts derived from specific pieces of evidence where detectives establish proof that someone is guilty of an offence (Hess & Orthmann, 2017:18). An investigation is largely a scientific process. There is room for hunch and theory, but only within the confines of a rigid methodology. In forensic science, specification of what exactly is going to be done and how it will be done is important (Dutelle & Becker, 2019:13). Criminal investigation is a core element of policing mission statements and objectives covering counterterrorism, anti-social behaviour and quality of life issues (Stainton & Ewin, 2022:2).

Traditionally, investigators read reports of criminal behaviour, and it is unlikely that the originator of the report would identify the particular offence that would have been committed. One of the first steps would be to identify which if any criminal offence would have occurred. The investigator would often hear the phrase “points to prove” This refers to an analysis of law, identifying elements that an investigation would need to achieve to support a successful prosecution (Stainton & Ewin, 2022:6). Effective investigations follow standard procedures in scientific investigations that can be explained in court i.e., they follow a scientific protocol. Protocols for proper handling of evidence are followed to avoid compromising or contaminating the evidence (Mirakovits & Gina, 2015:3). A

suspect may be guilty or not. The police may rely on an eyewitness account to determine if they have the real suspect or not. The eyewitness must undergo a recognition memory test. The recognition procedure is used in a way that maximises the chances of pursuing the real suspect whilst avoiding apprehending innocent people (Wixted & Mickes, 2018:3). Police interviews can affect the criminal investigation process positively or negatively, including the outcome of the investigation. Thus, effective interviewing of suspects, victims and eyewitnesses helps investigators to gather detailed information connected to the crime and the probable suspect thereby increasing the credibility of the evidence collected (Fortin & Deslauriers-Varin, 2021:637). The criminal investigation is a study of how crimes were committed, what transpired, why were these crimes committed, who was involved, where they took place and how they happened. Criminal Investigating further involves taking statements from suspects, witnesses and victims and preparing victims and witnesses for court appearances so that they do not make mistakes during cross-examination.

#### **3.4.1 Criminal Investigation at SAPS**

A crime investigation is more complicated in South Africa. Investigators have to comply with legislation specifically, the South African constitution and the Criminal Procedure Act 51 of 1977 (Zinn and Dintwe, 2015:10). The investigation process almost always begins with the police simply asking questions, be it of the person who reported the matter, the victim, a possible witness, or the suspect. The police do not need any special powers to ask questions.

Conversely, there is no general legal duty on persons to answer the questions that the investigating officers ask them or to supply the police with information that they may have about a crime (Joubert, 2018:269). The researcher is paying special attention to laws governing GBV. The SAPS is on a mission to reduce GBV cases in South African communities and to aid these efforts, the FCS component was created to focus on investigations against GBV offences. The Family Violence, Child Protection and Sexual Offences (FCS) unit focuses on fighting GBV, sexual offences and violence against children. The FCS is guided by different Acts that are contained in the Criminal Procedure Act of 2007, which include the following:

a) *Domestic Violence Act no 116 of 2009.*

This act affords victims of domestic violence maximum protection from domestic abuse and introduces measures to ensure that relevant organs of state fully implement the provisions of this act and thereby to show that the state is committed to the elimination of domestic violence.

b) Sexual Offences Act and related matters (Act No 32 of 2007)

The Act focuses on special measures for children. Sexual acts are classified as crimes if they are committed without the agreement of one of the people involved in a sexual act.

The court must decide if a person gave consent to the Sexual Act. The Act covers:

- **rape** which is defined as sexual penetration of another person without their consent.
- **sexual assault**, which according to SOA, is committed when a person threatens to sexually violate another person. It includes any act which causes:
  - i. Direct or indirect contact between the genital organs, anus or female breasts of one person and any part of the body of another person, an animal or object.
  - ii. Mouth of one person and
    - genital organs, anus or breasts of another
    - mouth of another person
    - any other part of the body of another person which causes sexual arousal.
    - any object resembling genital organs, an anus or breasts;
    - any person's mouth and genital organs or anus or breasts
    - masturbation of one person by another or the insertion of any object similar to the genital organs of a person or animal into or beyond their mouth.
  - iii. Other sexual offences against adults
  - iv. Incest
  - v. Bestiality and
  - vi. Sexual Act with a corpse
  - vii. Sexual offences against children
  - viii. Sexual offences against persons who are mentality disabled
  - ix. Pornography

- x. Trafficking in children

### **3.4.2 The Goals of Criminal Investigation**

The goals of criminal investigation are more complex than to solve a crime, discover facts and who did it. Investigators must first establish if a crime has been committed or not. If a crime has been committed, detectives systematically pursue evidence to identify suspect and locate the suspect as well as get enough evidence that serves as proof of a guilty verdict in court (Hess & Orthmann 2017:10). The goal of the investigation is to determine the nature of the crime committed, the suspect and the evidence to prove the crime (Gardner & Krouskup 2019:31).

The powers of the prosecutor during a criminal investigation are defined by the model of the criminal justice system in a particular jurisdiction. The tasks and duties assigned to a prosecutor during investigation include initiation of an investigation decision on search and arrest (Kremens, 2021:46). The criminal investigation process also requires a positive attitude towards the pursuit of evidence at an incident scene and that experience plays a crucial role during this process (Zinn & Dintwe, 2015:06).

The goal of crime investigation is to gather facts that are checked and analysed to conclude, whether that indeed a crime was committed or not, and thereby help those who seek justice get it. By following the correct procedures of investigation, law enforcement authorities can successfully link and identify correct perpetrators and conclude with a successful prosecution that has no loopholes.

## **3.5 THE DIFFERENCE BETWEEN IDENTIFICATION AND INDIVIDUALISATION OF CRIME**

### **3.5.1 Identification**

Identification relates to the process of identifying an individual who may be a suspect, victim, or witness during investigation. Identification extends to the point where the investigator traces and identifies evidence at a scene that can link a perpetrator to the scene. This view is supported by Erzsebet (2017:28) who indicated that identification is a multifaceted process that categorises an unfamiliar material and unveils its origin. Identification is divided into two steps namely defining the items in question and



classifying them into smaller or larger groups of items. Individualisation points to a unique source. Identification includes probing prints, marks, physical evidence and other relevant items related to an incident. The exact source of the evidence needs to be pointed out to reconstruct events while uncovering a crime. Similarly, identification is the process of clarifying the physical characteristics of a substance with a degree of certainty (Girard, 2021:363).

The identification process is reduction process, from the initial population to a restricted class or unit. The initial population constitutes control high inter-source- to- intra-source variance known variance in time, normalization (standardization), and independence (Houck, 2015:96). A face sketch drawn by a sketch expert is one critical evidence that is used to identify and apprehend a suspect involved in a crime incident. In a traditional system, these sketches are sent to different police stations and pasted on the wall at different places. Currently, the identification of suspects by humans is better than that done by machines as people describe subjects in a similar manner. A person is recognised and remembered using facial attributes, race, gender, and the place or country they live, (Khan & Jalal, 2020:01).

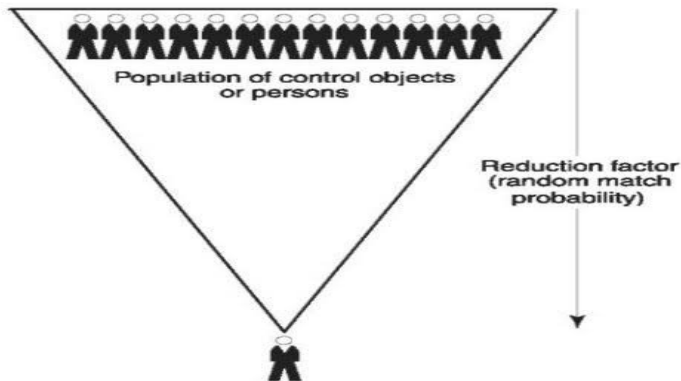
Identification of an object is used to characterise its physical or chemical composition. In the investigative environment, identification has no evidential value because it cannot link a person to a crime (Lochner et al., 2020:50). Identification does, however, have investigative value and can be productively used because it can be seen as the starting point of an investigation (Lochner et al., 2020:50). Categories of identification are found in various combination, depending on the kind of crime involved, and therefore each object must be considered individually or jointly with others of the same kind (Lochner et al., 2020:50). Identification is categorised into:

- Witness identification
- Behaviour Identification
- Perpetrator identification
- Impression identification
- Identification by origin
- Cumulative identification

### **3.5.2 Individualisation**

Individualisation proves that a particular unfamiliar sample is exclusive, even among members of the same class or proving that an unknown example and questioned sample share an exclusive shared origin (Girard, 2021:25). Individualisation can mean one of two things: (1) that it can be recognised as unique among members of its class; and (2) that when an unknown object is compared with an exemplar item, it is found to have had a common origin (Harris & Lee, 2019:22). Objects may also possess individual characteristics and features that are unique to them and distinguish them from other members of the class. Individual characteristics permit evidence or persons to be individualised (Harris & Lee, 2019:22). Individualisation can be viewed as a special case of identification, where the restricted class is populated by one object only. Definitions of individualisation in the forensic literature (e.g., fingerprint, footwear, marks, or tool marks) systematically refer to the capability of pointing to the right source to the exclusion of all others (objects or persons) (Jamieson & Bader, 2016:72).

Individualisation and scrutiny of individual characteristics are key aspects of a forensic investigation. It is usually conclusive to state that a particular sample of blood or a fingerprint indeed comes from a particular individual. This is based on how the evidence was found by the technician. Evidence considered outside of context does not add any value (Gardner & Krouskup, 2019:20). The researcher asserts that individualisation in light of the Criminal Justice system implies distinguishing a person from a group of people who share similar features, or separating an evidential item from other similar items to conclude that this person or item can be linked with a crime scene. Figure 1 is a good example of the individualisation of a person amongst a group that shares the same characteristics.



*Figure 1: individualisation process by Champod & Biedermann (2023)*

Individual characteristics are distinct differences in the physical or biological evidence that allow it to be related to a particular group and assigned to a class (Fish et al., 2015:17). The individualisation of an impression is established by finding agreement of corresponding individual characteristics of such number and significance to exclude the possibility of that having occurred by chance and showing that there are no differences that cannot be accounted for (Jamieson & Bader, 2016:97). Individualisation is mostly applied to finger, palm and other prints associated with body parts, tool marks, footprints and rifle identification as well as handwriting examination (Erzsebet, 2017:30).

Identification cannot be separated from individualisation, and the two form an integral part of the investigative process. individualisation comes after identification because an object or item must first be identified before it can be individualized (Lochner et al., 2020:57).

### **3.6 RIGHTS OF VICTIMS**

According to a Victim Charter, a victim of crime is a person who has suffered harm that may be physical or mental injury; emotional suffering; economic loss or substantial impairment of his or her fundamental rights, through acts or omissions that violate our criminal law. Victims include where appropriate, the immediate family or dependent of a direct victim. A person may be considered a victim regardless of whether the perpetrator is:

- Identified
- Apprehended
- Prosecuted or convicted; and

- Regardless of the familial relationship between the perpetrator and victim.

In South Africa, currently, victims are not determined by the criminal justice system. This is so even though the South African government is committed to implementing measures to continuously reform the criminal justice system to protect and promote victims' rights in compliance with international human rights instruments such as the United Nations Declaration of Basic Principles of Justice for Victims of Crime and Abuse of Power (1985). It is also in line with the Prevention and Eradication of Violence Against Women and Children Addendum to the 1997 Southern African Development Community Declaration on Gender and Development (Murhula & Tolla, 2020:106).

Victims of crime experience various short and long-term emotional and psychological effects. Victims of violence describe feelings of shock loss of trust in society and guilt of becoming a victim of crime, as they feel that they could have prevented the incident from occurring. Violent crime can also cause a feeling of uncertainty, disempowerment, vulnerability and high levels of worry about personal safety in victims. Violent victimisation leads to the development of symptoms of fear, anxiety, depression, confusion, sadness, anger and stress (Dinisman & Moroz, 2017:4). In South Africa, efforts to establish victim-centred policies and practices. Pillar 1 of the National Crime Prevention Strategy of 1996 gave impetus to victim-centred policies and practices by paying considerable attention to victims. Efforts have been made to address the needs of victims in the criminal justice process and the prosecution of crimes (Roberts, 2020:3).

Every day, a person's rights are violated in South Africa, either by their partners, colleagues, neighbours or, in some cases, strangers. As much as suspects are protected by the constitution, victims have rights and programs that are designed to assist victims of crime and GBV. Chapter 02 of the Victim Support Service bill (2019:61) rights of a victim include to:

- a) be treated with dignity and privacy.
- b) receive information.
- c) offer information.
- d) receive protection.
- e) receive assistance.

- f) apply for compensation and restitution in terms of the Criminal Procedure Act, 1997 (Act No 51 of 1997)
- g) have a legal practitioner assigned to him or her by the state and a state expense in the event the victim decides to claim for damages and to be informed of this right promptly, and
- h) exercise his or her rights to remain silent if not ready to testify and to be informed promptly of the consequences of remaining or not remaining silent.

The SAPS is committed to provide a victim-friendly service where the dignity and rights of victims are protected, empowered and not subjected to secondary victimisation by the inefficiency of the members of the criminal justice system. Emotional support, practical support, providing information and referral to professional support services are the four basic elements of victim empowerment (South African Police Service, 2019). The researcher emphasises that all victims of crime must be treated equally and sensitively, during the interviewing stage of a victim accommodating environment must be offered to avoid second victimization and to help the victim gain confidence. In addition, SAPS provide victim-friendly rooms (Victim Empowerment in South African Police Service, 2014:03).

According to Victims Empowerment in South African Police service (2014:05), the first police detail who attends to the victim should:

- react immediately.
- introduce him/herself to the victim.
- determine and ensure the safety of the victim and arrange for medical assistance. If necessary, ensure that all possible evidence is preserved and collected from the medical practitioners/hospital/clinic.
- interview the victim in a language that he/she understands. If the member cannot speak the language, he/she must arrange for another member who can converse in the same language or arrange an interpreter.
- allow the victim's request that he/she be interviewed by a police official of the same gender, all possible attempts must be made to adhere to the request.

- inform the victim that he/she may have a person present for support during the different processes, for example, the interview, statement taking and medical examination.
- inform the victim of the different/applicable processes that will follow (statements taking, registering of case dockets, medical examination and investigation).
- notify the relevant detective performing standby duties of the case as soon as possible and ensure that the detective attends to the case as soon as possible (Victim Empowerment in South African Police Services, 2014:06).

Between 2021/2022, Stats SA estimated that 20000 incidents of murder and 12000 incidents of sexual offences occurred in South Africa. Meaning that there are more incidents of other crimes that were reported. Every year, more people become victims of crime, regardless of gender, age, or skin colour. Women and children all are the most vulnerable group to victimization. The reason they are targeted is because they cannot fight back the perpetrators.

### **3.7 SUMMARY**

Before delving deeper into the use of forensic identification techniques in the investigation of gender-based violence, it is critical to first gain an understating of forensic investigation, identification, individualisation and victims' rights. Forensic investigation is a method of investigation that entails using scientific techniques to identify a crime suspect. A criminal investigation is a traditional method of investigating a crime that does not put much focus on testing evidence at a laboratory and does not use chemicals and machines to test evidence. Criminal and forensic investigations have the same purpose, which is to establish the truth by using various methods of identification to prove facts.

This chapter proceeded into greater detail about forensic investigators or crime investigators and that they must have specific skills, attributes and training in dealing with both the suspects and victims to avoid violating their constitutional rights. Investigators dealing with GBV must be equipped with forensic investigation to ensure that they treat evidence obtained at the crime scene with caution so that forensic investigators do not encounter a challenge during the process of identification.

## **CHAPTER FOUR: FORENSIC IDENTIFICATION TECHNIQUES**

### **4.1 INTRODUCTION**

The goal of this chapter is to assess the use of forensic identification techniques in the investigation of gender-based violence. Investigators employ forensic identification procedures to be able to identify and solve crimes. In criminal investigations, identification methods are the most valuable and dependable tools. According to Mc Quiston-Surret & Saks (2017:183), forensic identification evidence informs an investigator of the association between characteristics of objects in a related group of objects which are not important in the present case. This informs them about the characteristics of the evidence that is important in the current case and the evidence will be up to the jury to apply the general knowledge to the details that are crucial in the case. This chapter aims to evaluate and explore more about forensic identification techniques that are used within the South African Police Services. The diversity of criminal activities makes accurate and efficient identification a critically important requirement for forensic science (Saini & Kapoor, 2016:02).

### **4.2 The VALUE OF FORENSIC IDENTIFICATION**

According to Erzsebet (2017:31), one essential element of a criminal investigation is identification. However, in most cases, there may be a disagreement between identity pronounced by forensic experts and the identity proven in court. A judge relies on reports of forensic experts and other available evidence to prove identity in court. However, Mallet, Blythe & Berry (2014:396) mentioned that the identification of criminals defines the success of a criminal investigation. In most crimes, the suspects are caught easily as they are either caught red-handed at the scene, swiftly traced or caught by the general public rather than by the police. Forensic identification is used where public assistance cannot yield results. It includes the use of fingerprints and DNA profiles to identify criminals.

In addition, the researcher thinks that identification techniques are a useful tool used by detectives to examine and pinpoint criminal offenders. Identification techniques, for instance, play a crucial role in revealing reliable results when a person is brutally murdered without any witnesses being present. Deslauriers-Varin & Bennell (2021:03)

point out that effective identification and prioritisation of suspects is pivotal to ensure efficiency in an investigation. Eyewitness accounts, forensic evidence or other methods are used to assist investigators identify potential suspects and prioritising them if the identity of the offender is unknown or the police lack a confession. Erzsebet (2017:30) argues that identification results in the reduction in the number of potential entities to a level where individual identification will help targeted investigations. This improves the certainty to which a particular item and its source are identified. It is impossible to know the person who left fingerprints at a crime scene, whose rifle discharged the shot or whose DNA was found on a murder weapon.

Mozayani & Fisher (2018:61) emphasised that identification prior knowledge of who a person might be although there may be a few exceptions. Types of prior knowledge can include direct identifying information such as photo identification and witness statements as well as contextual information such as address of the death, name of a person to whom a vehicle is registered and scars, marks or tattoos or scientific information. Furthermore, the identification procedure is seized with individual identification. The certainty to which a theory and method used during identification process can distinguish objects is the main criterion of criminal identification (Erzsebet, 2017:28).

### **4.3 THE FORENSIC IDENTIFICATION TECHNIQUES**

According to Saini & Kapoor (2016:02), forensic techniques are used in the investigation of criminal activities in the same manner as traditional methods. "Forensic science" starts with the effective identification and recording evidence as well as collecting notes, pictures, sketches and videos of crime scenes. The collection and preservation of physical covering items including fingerprints, footprints and biological evidence such as DNA, bodily fluids, hair, skin and bone material at the crime scene is also done at the beginning of a forensic investigation. Queiroz, Bostock, Santos, Guimaraes, and Silva (2016:348) stipulate that identification methods must be methodically thorough, consistent, appropriate for field conditions and implemented within a reasonable period. The most reliable methods of identification are fingerprint examination, dental analysis and DNA analysis. Delgado (2020:3) states that criminal identification relies on advanced scientific techniques linked to the body, fingerprints, DNA, surveillance systems,



photographs, gait analysis and other body traces analysed to determine the identity of a suspect. Identification methods include face recall technology that was developed in the twentieth century. Face recall technologies create a picture of an absent suspect using a witness's memory. Pencil sketches or composite images can be developed into portraits for identification purposes. The researcher believes that one of the forensic identification techniques is crime scene protection, which is critical because one mistake can destroy all evidence available at a crime scene. A crime scene contains all crucial evidence that can assist investigators in successfully solving cases.

Erzsebet (2017:29) mentioned that identification and a forensic investigation first focus on discovering the characteristics, then perform comparative examinations and draw conclusions from the evidence and lastly issue a forensic expert report. The researcher would like to add that if the scene is properly managed, discovering these characteristics can be considered reliable. If the scene is not properly managed or secured, the results will be unreliable. Furthermore, the ability of police to adequately respond to a crime greatly depends on the various investigative techniques and methods available to investigators. The available techniques impact on identification, arrest and charging the perpetrators of crime to their conviction (Fortin & Deslauriers-Varin, 2021:635).

Cases where the alleged perpetrator is not tried due to lack of evidence are a risk to community safety. In addition, if an individual is wrongly convicted of a crime, the community's loses confidence in the police forces and the criminal justice system (Fortin & Deslauriers-Varin, 2021:635). Suspect identification was a challenging task over the past decades. There has been a continuous increase in security using state of art technologies. However, despite this the rate of crime is still increasing. Surveillance cameras have been installed in many places to monitor and deter criminal activities. Surveillance cameras help in the identification of criminals to a certain extent. However, it is quite challenging to install surveillance cameras in every place (Khan & Jalal, 2020:01).

#### **4.4 FORENSIC EVIDENCE**

The importance of evidence in the investigation cannot be overstated. Without it, investigations would be meaningless. No matter how minor the evidence obtained from

the crime scene, it must always be safeguarded. Criminal knowledge has improved; as new investigation techniques are developed, criminals' knowledge of how to get away with the crime is updated. A criminal would use any means possible to erase evidence after committing a crime, particularly murder or rape. According to Bowen (2018:31), evidence is material in physical or testimonial evidence that proves or disproves facts. Forensic scientists examine evidence and place facts together based on evidence, attorneys, judges and juries via reports and testimony.

Dutelle and Becker (2019:18) state that evidence has to be properly collected, packaged, labelled and transported to reduce chances of it being prone to error and losing integrity. Evidence is then stored, removed from storage and transported to the laboratory. Additionally, the process of identification allows the analyst to classify the evidence into successively smaller classes of objects as the identification becomes more specific. It may not be necessary to classify the evidence beyond the scope of the investigation (Houck 2015:85). Bowen (2018:34) further mentioned that investigators submit documented evidence to the laboratory to enable scientists choose the most appropriate analyses to conduct on the objects and this includes a description of the type of evidence submitted, the criminal circumstances surrounding the crime, the name of the investigator brought the items for analysis and the type of examinations that are required from the laboratory. Brandl (2018:40) states that criminal evidence consists of information obtained as a result of investigative activities that relate to a particular crime or perpetrator. Criminal evidence is used to show that a crime occurred and who specifically committed the crime. It is the job of an investigator to find clues that can point to the perpetrator, no matter how hard the perpetrator tries to erase the evidence. In *S v Nyangwa* (2018) Sergeant Matila in Motherwell Police Station received a report about the presence of the body in a partially constructed house in Mvokontshi Street. He attended the scene and found a naked body of a young woman. The lower portion of her torso and legs had been destroyed by fire and the body was still smouldering. In this case, the investigation led to the accused who was seen with the victim before the incident. When the investigator arrived at the accused place, he found a bloodstain on the jeans that he was wearing while accompanying the deceased to the tavern, he was then arrested. It was further confirmed by the forensic

investigators after a thorough investigation that the blood found on the accused clothes was that of the deceased.

This case proves that perpetrators can even burn victims' bodies and bury them somewhere no one can find them. Such is done because their main goal is to get rid of evidence that could lead to his prosecution. A trained investigator can delve deep until the perpetrator is apprehended.

#### **4.5 FORMS OF FORENSIC EVIDENCE**

Forensic evidence is critical because it identifies the true perpetrator and helps to avoid prosecuting the wrong suspects. Chances of successful prosecution in court are high if proper procedures are followed to collect evidence at the scene. According to Bowen (2018:25), before processing evidence, it must be sorted to allow efficient interpretation and application to the crime. The following paragraphs explain the categories of crime scene evidence.

##### **4.5.1 Physical Evidence**

According to Girard (2021:3), physical evidence is usually collected by the police or a civilian crime scene technician. Physical evidence includes any relevant materials associated with a crime scene, victim, suspect or witness. Any item can be a piece of physical evidence under the correct circumstances. Mozayani and Fisher (2018: 4) indicate that all physical evidence that is deemed of potential evidentiary value is collected and properly preserved. Generally, the collection of valuable evidence follows steps that include documenting the scene and the items in *Situ*. However, the presence of certain transient types of evidence, pressing environmental conditions or certain scene considerations may necessitate collection of the items or samples before complete documentation occurs.

Erzsebet (2017: 27) states that it is important to study clues and physical evidence to be able to identify how a crime was committed, where it happened and the perpetrator of crime. Specialists including criminalists and forensic scientists can properly answer the questions that occur during an investigation. A sample of physical evidence collected at the crime scene is called a questioned sample because its origin still needs to be confirmed. A link between a questioned sample and a particular person or place can be

established through securing a known sample (control, reference or standard sample) from the relevant person or place for comparison. The forensic scientist may sometimes create the known sample (Girard, 2021:15).

Moorthy and Sukuman (2015:13) elaborated that one valuable piece of physical evidence that a suspect leaves unintentionally at the crime scene footprints. Physical evidence is utilised to express individual features. A detailed analysis of footprints provides useful information to establish personal identity and ease the crime investigation. Physical evidence is any material obtained at a crime scene, and it can be fibres, fingerprints footprints among other materials.

#### **4.5.2 Biological Evidence**

The researcher considers any DNA body fluid that can be found at a crime and used to identify suspects to be biological evidence. A crime scene involving violence, such as one involving rape, murder, assault, or any other type of crime, can yield biological evidence. Similarly, Gardner & Krouskup (2019:23) state that biological evidence includes blood, spittle, semen or vaginal fluids as well as bone or tissue. Girard (2021:15) argues that biological evidence is located visually as well as by touch and smell. Biological evidence is usually enhanced through chemical means before analysis is possible. Swabs and gauze are used to sample stains. A scalpel is used to scrap dried stains. The following paragraphs explain the categories of biological evidence that may be encountered at a scene of gender-based violence.

#### **4.5.3 Body Fluids**

Willaims (2020:1) states that body fluids, particularly blood, are valuable evidence in many offences including violent crimes, where any sort of injury has occurred e.g., being cut by broken glass or nose bleeds where the offender may suffer from high blood pressure as a result of anxiety or stress. Moreover, the identification of body fluids is an essential procedure in a criminal investigation. For example, the identification of vaginal fluid in a sample containing semen provides important evidence to prove vaginal intercourse in a case of sexual assault (Akutsu, Watanabe, Takamura, & Sakurada, 2017:211). A victim's bloodstain on the suspect's clothes is also valuable evidence that

helps investigators link an offender to a crime. Thus, body fluid evidence can be obtained from the scene, victim or suspect.

According to Sijen and Harbison (2021:1), body fluid and body tissue identification make available important evidence to anchor criminal investigations and provide concrete evidence for the court to reach conclusions. The link between a fluid or tissue and the DNA profile adds credibility to the evidence. Many forensic laboratories use standard techniques that are widely used for some time to identify biological fluids. Willaims (2020: 1) points out that there are other body fluids which are relevant to a forensic investigation, but currently no standard tests exist to analyse them. Vaginal fluid or vaginal material is one of the mostly encountered body fluids. A pure sample is referred to as vaginal fluid or secretions whilst vaginal material refers to material that has been transferred from the vaginal cavity that consists of vaginal fluids and other substances e.g. menstruation blood and microflora. Body fluids, according to the researchers, are any liquid or discharge produced by the human body. Body fluids can be obtained from any crime scene, particularly a murder or rape scene where violence was involved. It can include saliva left by a perpetrator into a target's body or at the scene via bite marks where a victim is resisting or attempting to defend themselves against the violence, and it can be blood or the perpetrator's semen obtained from a primary or secondary crime scene.

#### **4.5.4 Blood**

According to Hanslip (2020:2), blood is a common and very important kind of evidence that can be found at scenes of violent crime. Blood provides valuable evidence that is a key component in forensic investigation. Swanson et al., (2019:119) mentioned that it is easy to identify blood in a fresh scene that is relatively uncontaminated. By contrast, it is difficult to identify blood merely through "eyeballing it" if it is in another condition. Blood may look like a rust-coloured stain or grey, green or blue colour. Blood may be contaminated by earth, paint, grease or other substances such that it becomes difficult to identify. Minute drops of blood can be identified using special techniques. A flashlight beam can be shined at the same oblique angle to enhance viewing of the surfaces in dark scenes. Blood can be obtained from a crime scene in two forms: liquid blood, and dried blood. Both types of blood serve the same purpose in the identification of suspects. The

only difference is that wet blood can be collected using a swab in a pool of blood during the collection of blood evidence. Regardless of how the suspect attempts to clean blood evidence, forensic experts have chemicals that are utilized to expose blood that has been cleaned up at a crime scene. Hanslip (2020:4) states that blood-based evidence may degrade or perpetrators may try to clean the crime scene thereby making bloodstains becoming invisible to the human eye. Chemical analysis is conducted to check if bloodstains are on fabrics in cases where they cannot be detected with the human eye. Although bloodstains are usually associated with violent crime scenes, tests are conducted to identify if probable bloodstains are really blood.

#### **4.5.5 Bloodstain Pattern Analysis**

According to Saferstein (2018:134), blood spatter patterns provide a great deal of information about the events that transpired at the crime scene. Lee, Seo, Moon, Kim, Goh, Park & Shin (2020:1) indicate that bloodstain pattern analysis identifies the physical features of bloodstains including the size, shape and distribution to recreate a crime scene. Bloodstain pattern analysis facilitates the reconstruction of a crime scene of a bloody murder and determines the genuineness of the suspect's statement as well as assumes a suspect depending on the case.

According to Girard (2021:36), biological evidence is highly vulnerable to change. A bloodstain at a crime scene is wet soon after the shooting then it dries as it is exposed to air and then turns brown. In direct sunlight a bloodstain can change from a red to a dry spot in a short period. Swanson et al., (2019:120) consider that an investigator can learn significant information that facilitates rebuilding of a crime through studying bloodstain and spatter evidence. This evidence can include the:

- direction of travel for blood droplets when they were deposited on the surface.
- distance of the blood droplets from the source to the surface on which they were found.
- angle at which the droplets are impacted.
- direction and relative speed of blood trails.
- nature of the weapon used.
- number of blows there were struck.

- relative locations of other items with droplets on them.
- order of events that transpired.
- interpretation of blood-transfer patterns.
- estimation of the time that lapsed for the event and the volume of bloodshed.

Basu and Bandyopadhyay (2017: 200) further point out that violent crimes are commonly associated with large spillage of blood. Blood can be formed as accumulates as a liquid on permeable surfaces such as carpets, fabrics, clothing, bed sheets or curtains thereby creating a saturation stain. The researcher wishes to add that bloodstains found at a scene are a key source of evidence because the bloodstains obtained from the scene can point out the kind of weapon used, which direction it was coming from, and whether it is a victim or suspect's blood. This can be determined when properly analysed in a forensic laboratory. Various blood patterns can be obtained at a crime scene, including active, passive and transfer:

- **Active bloodstains-** Bloodstains that have travelled by any other force other than gravity are called active bloodstains. Active bloodstains occur in several ways (Jackson & Jackson, 2017:156).
- **Passive bloodstain-** Are formed exclusively under the influence of gravity. A passive bloodstain flows, pools and drops. Passive blood stains at a crime scene may be extensive and may cover surfaces, objects and parts of the victim's body (Jackson & Jackson, 2017:158).
- **Transfer bloodstains -** Transfer bloodstains refer to bloodstains that have been deposited on surfaces through direct contact with objects contaminated with wet blood. Transfer bloodstains are commonly present at bloody crime scenes because wet blood can be transferred easily (Jackson & Jackson, 2017:162).

#### 4.5.6 Semen

Willaims (2020:1) states that semen is found in many cases of sexual assault and non-sexual crimes e.g., product tempering. Blood, semen and saliva are the most significant body fluids whilst urine and faeces are also used for DNA analysis. The researcher wishes to add that to successfully collect semen from the crime scene an investigator must have

a rape kit which includes all the equipment needed for the process. Evidence of sexual abuse or assault is collected at a medical facility. The victim is attended to by a forensic nurse who collects evidence of hairs, swabs and bodily fluids at the medical facility and this depends on arrangements between the law enforcement agency and the medical facility (Suboch, 2016:12).

Semen is the most important biological evidence used to demonstrate that sexual violence did occur. Semen is a body fluid that a suspect gave to a victim during a rape. The victim mustn't clean his or her body after the incident, as this can remove vital evidence. A victim's body is the primary crime scene. Moreover, authors such as Das, Ammal, Harshey, Mishra, & Srivastava (2021) confirmed that semen is one of the most significant exhibits typically encountered in sexual assault cases and it is considered an absolutist priority in most of the cases since it sufficiently proved to be conclusive evidence confirming that sexual assault would have occurred. Traditionally, chemical tests were performed for decades to analyse semen.

#### **4.5.7 Bite Marks**

Forensic dentistry is used to analyse bite marks and it is an important technique (De Araujo, Recalde, Jacometti, Costa & Dasilva, 2019). Vala, Gopani & Babaria (2021) state that bite marks are marks made by teeth only or are made in combination with teeth and other parts of the mouth. Bite marks are circular, avoid areas of abrasion, avoid contusion and are usually linked with indentations. Bite marks are a category of pattern injury that is caused by a specific object. Ribeiro, Tangen, and Mclammie (2019:3) state that bite mark analysis is considered the most controversial forensic technique when compared to DNA and fingerprint analysis. Bite mark analysis assumes that each person makes exceptional bite marks. A similar assumption is used in fingerprint analysis. Several methods are used to analyse bite marks. However, there is no evidence of the repeatability of any of the methods either between different experts or by the same expert at different times.

Dental structure, denture labelling and DNA from teeth are widely used for successful dental identification (Queiroz, Bostock, Santos, Guimaraes & Silva, 2016:348) However, bite marks are usually the only evidence available in a forensic investigation. Based on



bite marks, many convictions were challenged in courts because of subjectivity and errors associated with this technique. Hence, the theory that teeth of one individual are different from that of another person is a solid point used to convince a court of law (De Araujo et al., 2019). The researcher thinks that various situations can lead to victims or suspects leaving bite marks on one another's bodies. When victims are being attacked, they try to fight back and defend themselves from the perpetrator. During the incident, the victim or even a suspect can use their teeth to fight back and defend themselves. The marks discovered by experts in a victim or suspect's body are then properly analysed by DNA dental experts to see if the results match the one of a suspect or victim. Vala, Gopani & Babaria (2021) further mentioned that bite mark alteration on the skin depends on the position and movement of the bitten person when he/she was injured. In violent crimes, biting usually occurs during struggles. During struggles the skin is usually stretched when bite marks are made but when the skin returns to normal shape, bite marks on the skin are altered to an unknown extent.

De Araujo et al., (2019) state that the information from bite marks can be obtained through dental and DNA tests. Bite mark analysis includes measurements and overlapping images from the characteristics observed in the bite thereby providing physical evidence. DNA from the saliva contained in the bite marks can provide biological evidence.

#### **4.5.8 Hair as Evidence**

Hair can be extremely useful in identifying a perpetrator, especially if it contains the root, which can be tested for DNA. Hair can be obtained in most sexual assault cases because it can be stuck in a victim's body during the incident. Woods (2019:109) states that hair provides a wealth of information. Analysis generally begins by determining if it is human hair or animal, and if animal, what species. Human hair can reveal the race of the individual, part of the body the hair came from, the manner it was removed, if it is dyed or bleached and contaminations on the hair shaft. The race of an individual is best determined by head hair. If drugs were ingested, the hair can be used to tell how long ago and whether the individual was a smoker. Because hair is so resilient, useful determinations can be made long after other tissue has decomposed. Saferstein (2018:261) indicates that to establish whether hair originates from a human or an animal

or to determine whether human hair retrieved at a crime scene compares with hair from a particular individual, hair evidence is examined in a crime laboratory. In addition, in rape cases, the victim's pubic area is first carefully combed using a clean comb to collect all loose foreign hair present then the victim is sampled for a standard hair specimen. The comb must be packed in a different envelope.

Gardner and Krouskup (2019:30) explained that hair samples can be compared to exemplar hair samples to identify suspects. In addition, Hess, Orthmann and Cho (2017: 169) note that hair has different parts that are examined. These include a hair shaft that has a cuticle on the outside. The cuticle consists of overlapping scales that always point toward the tip. Hair also has a cortex that consists of elongated cells and a medulla that is the centre of hair and consists of variably shaped cells. Differences in these structures make comparisons and identification of suspects possible.

#### **4.6 FINGERPRINT IDENTIFICATION**

According to Saini and Kapoor (2016:3), a fingerprint represents the pattern of friction ridges and valleys on the surface of a fingertip. A fingerprint technician digitalises a fingerprint found at a crime scene and uses computer processes of biometric systems to identify all the exceptional fine detail and ridge points of a questioned fingerprint in comparison to a sample fingerprint. The exceptional features of questioned fingerprint are matched against those stored in a fingerprint database. Swanson, Chamelin, Territo & Taylor (2019:108) state that analysts study suspect fingerprints collected at a scene to identify the suspect. The analysts identify specific "points" on a fingerprint that give it exceptional characteristics and compare it to exemplar fingerprints. If there are enough points that are the same, an identification can be achieved. Huynti, Brunelle, Halamkova, Agudelo and Halamek (2015: 1) acknowledge that fingerprinting was accepted as a reliable identification method that relies mainly on pictorial comparisons by forensic investigators in the past century. There have been developments in software systems that increase the probability and speed of identification. However, one weakness of fingerprinting is that it absolutely dependence on the existence of a pre-recorded matching fingerprint. Saini & Kapoor (2016:3) think that fingerprints have been used for identification in criminal investigations for centuries. Fingerprinting is a very important tool

for crime detection because of it is a robust method that allows identification of exceptional features.

Fingerprints have class characteristics and individual characteristics discovered by forensic scientists. The general flow of the friction ridge pattern, which can consist of a loop, whorl or arch is the commonly observed class characteristic of fingerprints (Mirakovits & Gina, 2016:43). Every person was born with their fingerprints, regardless of whether they are related or not, we all have the distinct prints that set us apart from the crowd. Fingerprints contain three (03) patterns which are arches, loops and whorls. According to Daluz (2019:4), fingerprints in a population are mainly loop patterns, whorls are more uncommon and arch patterns are rare. Finding a latent print with an arch pattern at a crime scene is valuable for elimination purposes because they are so rare in the population. Conversely, finding a latent print with a loop pattern at a crime scene is not as discriminating, because loops are very common in the population. The different fingerprint classification is explained by Saferstein (2018:134) as follows:

- a) A loop pattern is characterised by ridge lines that enter from one side of the pattern and curve around to exit from the same side of the pattern.
- b) A whorl pattern includes a ridge pattern that is generally rounded and has two deltas.
- c) An arch pattern is characterised by ridge lines that enter the print from one side and flow out the other side.

#### **4.6.1 The Different Types of Finger-marks**

Daluz (2019:27) states that patent prints, plastic prints and latent prints are the three types of fingerprints found at crime scenes or on evidentiary items. Patent prints are visible to the human eye. They are friction ridge impressions in a visible medium bloody fingerprints and greasy fingerprints are examples of patent prints. Plastic prints are 3D “moulds” of friction ridges impressed into a soft material that includes tacky paint, wax or clay. Latent prints are invisible to the human eye and of unknown origin. Jackson & Jackson (2017:128) describe the different types of fingerprints as follows (Table 3):

**Table 3: Types of fingerprints**

Latent finger-marks	-Latent fingerprints cannot be seen with the naked eye, comprise of mainly perspiration exuded from the sweat pores, which occur in single rows along the ridges of the friction ridge skin.
Visible finger-marks	-Visible finger marks form when suitable material is put by fingertips onto another surface.
Plastic finger-marks	-Plastic finger-marks are formed when a negative ridge impression is made into some soft material.

Source: Researcher

#### **4.7 DEOXYRIBONUCLEIC ACID (DNA) IDENTIFICATION**

Ribeiro et al., (2019:03) state that DNA is considered a gold standard forensic technique because it allows little room for error. However, DNA can be affected by contamination, mislabelling during collection and handling and thus, testing can lead to incorrect results. In addition, samples containing multiple sources require more subjective judgement thereby leaving potential for human error or bias. Black & Bikker (2016:6) consider that confirmation of identification through DNA analysis is generally the preferred option because it has a high degree of assurance. However, fragmented DNA from the deceased can lead to inconclusive results. If there is no match to DNA from the database or no match to a known missing person in means that DNA may fail provide the desired outcome of assigning a name to the deceased. Mateen et al., (2021:2) point out that DNA has become an important part of the criminal justice system. DNA from a sample collected from a crime scene is compared with DNA from a reference sample. Mallet et al., (2014:396) posit that forensic DNA testing is accurate in detecting and convicting many criminals as well as acquitting wrongly convicted people. However, one limitation of DNA testing is the confusion of the extent of proof.

Mateen et al., (2021:2) argue that a perpetrator's DNA may be found on the crime scene, but the suspect is not available for comparison. In such a scenario it is difficult to find evidentiary value of the DNA sample found at the crime scene. There are also cases where a perpetrator's DNA is not available in a DNA database for comparison purposes, and this also makes it hard to find the real culprit. Zulfiqar, Ahmad, Sohaib, Mazzara, &

Distefano, (2021:2) mention that DNA tests are expensive and usually they take time to complete. Time and money can be wasted analysing false leads like paint stains.

#### **4.8 EYEWITNESS IDENTIFICATION**

According to Swanson et al., (2019:706), eyewitness identification is the proof of identity of objects involved in a crime by a witness who perceives the object through one or more senses. Wells, Douglass, Meissner, Kovera, Brewer & Wixted (2020:4) state that eyewitness identification is one of the main forms of evidence used by in justice system to establish the identity of crime culprits. Rubinova, Fitzgerald, Juncu & Hope (2020:167) highlighted that crimes are commonly witnessed as live events and the witness recognition memory performance is useful if the testing conditions are similar to how the memory was formed. Presentation of pictures or videos of line-up members is commonly used as practical identification technique. Gepshen, Wang, He & Diep (2020: 2) thinks that eyewitness identification has been used as a valuable technique in criminal investigations and prosecutions for a long time. Despite this value, in recent years, society has been confronted with many rank failures of eyewitness testimony.

Rubinova et al., (2020: 167) state that eyewitnesses are usually requested to recognise a stranger they observed committing a crime. Eyewitnesses are more likely to succeed in identifying a suspect if the line-up members are physically present. In common eyewitness identification procedures known as showups, eyewitnesses are shown only one individual who can either be innocent or guilty. Usually, a live individual is used not a photograph (Wixted & Mickes, 2018:3). Various techniques are employed by the detectives to assist the witness in identifying the perpetrator, and these techniques include line-up identification and show-up identification.

##### **4.8.1 Line-up Identification**

According to Ewulum (2019:133), a line-up is an identification procedure where a suspect can be recognised as the one who committed the crime. A line-up involves bringing similar-looking persons that include the suspect and showing them simultaneously to a witness who may recognise one of them as the one who committed the crime (Swanson et al, 2019:706). A line-up can also be conducted with photos. Furthermore, detectives are increasingly using line-up identification procedures because it is understood to aid the

victim's or witness's recollection in identifying a perpetrator. Suspects in a line-up do not necessarily commit a crime; they are there to assist detectives in apprehending the correct perpetrator. Rubinova et al., (2020:167) highlighted that eyewitnesses identify a perpetrator better from a live identification than from photograph or video alternatives.

The researcher argues that eyewitness identification is not accurate, and the criminal justice system should implement techniques to help the victims recall their memories so that the correct suspect can be identified. During the line-up, detectives are under no obligation to make any suggestions of assisting the victim in pointing out the correct suspect because they were not there when the incident occurred. Additionally, mistaken eyewitness identification contributes to convictions of people who would not have committed the crime. Recording the eyewitness identification process prevents mistaken eyewitness identification (Wells et al., 2020: 3).

A line-up is a formal procedure conducted by police officials to help the victim identify the suspect. A lineup consists of 1 suspect and 8 other people who resemble similar characteristics. During a line-up, the suspects must not be able to see the victim or witness who is identifying them for the sake of the victim's protection. These procedures are detailed in the SA Criminal Procedure Act of 1977. The Witness Protection Act 112 of 1998 intends to:

- ✓ Provide for the Establishment of an Office for The Protection of Witnesses;
- ✓ Regulate the Powers, Functions and Duties of The Director: Office for Witness Protection;
- ✓ Provide for Temporary Protection Pending Placement Under Protection;
- ✓ Provide for The Placement of Witnesses and Related Persons Under Protection;
- ✓ Provide Services Related to The Protection of Witnesses and Related Persons;
- ✓ Amend the Criminal Procedure Act, 1977, to Make Provision for Witness Services at Courts; And
- ✓ Provide for Incidental Matters.

#### **4.8.2 The Procedure of Line-up**

The line-up is conducted especially when a suspect is unknown to the victim. There must be only authorised persons allowed in the identification room. An identification parade

aids the witness's memory, to charge the perpetrator and avoid wrongful arrests. A line-up must be conducted using the correct procedure to protect the rights of the suspect. Joubert (2013:306) stated clearly described the procedure for an identification parade. The officials should:

- a) Record the proceedings at the parade.
- b) Avoid the investigating officer taking charge of the parade.
- c) Inform a suspect of the purpose of the parade and allow the suspect to obtain a legal representative to be present at the parade.
- d) Inform a suspect that a court might draw an adverse inference from his/her refusal to take part in a parade.
- e) Present only one suspect and at least eight other persons in the line-up of the parade.
- f) Ensure that the suspect and other persons on the parade are more or less of the same build, height, age, and appearance (including occupation or social standing) and be similarly dressed.
- g) take photographs of the parade, depicting the persons as they appeared in the line-up next to each other.
- h) instruct the suspect to choose a position in the parade lineup and, if he or she should so desire, to change positions between witnesses and ensure that the suspect is satisfied with the parade and that all suspects reasonable are granted.
- i) Keep the witnesses separately under the supervision of a neutral police official and not be allowed to discuss the case while waiting to be called.
- j) Prevent witnesses from seeing any member of the parade as well as the suspect before the parade begins in circumstances indicating that he/she is the suspect.
- k) Allow a neutral police official to escort a witness to the parade and afterwards to a place separate from where the witnesses are, who still have to inspect the parade.
- l) inform each witness of the possibility of the perpetrators, not the parade and that he/she must indicate if an identification cannot be made.
- m) request the witness to make his/her identification by touching the shoulder of a suspect.

Hess et al., (2017:236) argue that the suspect in the line-up must not be in handcuffs. Suspects may only be handcuffed if everyone in the line-up is handcuffed. The suspect should not be asked to step forward, turn a certain direction or speak certain words. This can only be done if everyone in the line-up is asked to do the same. In addition, the suspect and each individual in the line-up photographed separately and photographic identification is used if the suspect refuses to participate in the line-up or a fair line-up cannot be conducted for some reason.

#### **4.8.3 Showups Identification**

Showups are unlike the line-up that consists of a group of people. In a showup, there is only one suspect, and a victim is present to identify the suspect. Swanson et al., (2019:712) state that showups are where the police conduct immediate eyewitness identification for someone who is temporarily detained by them. The practice permits the immediate clearing of a wrongfully suspected person, and detention is kept. A minimum of one eyewitness is brought at a time to view the person who is temporarily detained. Hess et al., (2017:235) mentioned that a show up may occur two hours after a crime is committed. Where a suspect has fled the scene but is later apprehended within minutes, the suspect can either be returned to the scene or the witness may be taken to where the suspect was apprehended within minutes. The police can either return the suspect to the scene or take the witness to where the suspect was apprehended.

Showups can occur even at the crime scene. Furthermore, showups are conducted immediately following the commission of a crime to aid the victim's memory in ensuring that the correct suspect is arrested. Officers in charge of showups are not permitted to share any information about the suspect with the victims. Hess et al., (2017:228) further mentioned that witnesses can recognise a suspect where the suspect may be caught during the process of committing a crime. This also applies if a suspect is caught at or near a crime scene.

#### **4.9 PHOTOGRAPHIC IDENTIFICATION**

Photo identification is when detectives employ photos instead of live identification. Police officials conduct the photo identification based on information provided by a victim or



witness. The suspects involved in a photo line-up share similar physical characteristics including body structure. Police officers involved in identification are not allowed to give any suggestions to the victim or witness. Swanson et al., (2019:204) explained that photographic identification is a technique where a series of photographs (usually six), where each picture is in a separate folder, are shown sequentially to a witness to establish if the witness can recognise the suspect. A witness is given one photograph at a time to decide whether the person in the picture is the suspect before looking at the next picture. The witness can also view all photographs sequentially, but not simultaneously before making an identification. Moreover, photographic identification is used if an alleged criminal has been not apprehended or if a physical line-up cannot be fairly done (Hess et al., 2017:235). According to Peska & Trojanova, (2017), photo line-ups are used to provide evidence in the prosecution and subsequent conviction of suspects. Furthermore, photographs can be obtained through surveillance from booking photos, or from driver's license databases (Hess et al., 2017:235).

#### **4.10 VOICE IDENTIFICATION**

According to Woods (2019:156), people commonly recognise the voices of others. Picking up a telephone we may recognise immediately the voice of a person we have not seen for months or even for years. Voices are distinctive, and individuals can be distinguished by the sounds such as pitch, intensity and "quality", that the human ear discerns as unique patterns. Investigators are generally less interested in recognizing a human voice than in proving the identity of the speaker in court. The court is often more willing to accept identification testimony from an individual familiar with the suspect than from forensic experts. Robson (2017:36) argues that the evidence of a witness who purports to recognise a defendant through knowledge of his/her voice can be used decide if one is guilty or innocent in a criminal trial by itself. The researcher thinks that voice identification is most commonly used when the victim or witness would not have seen the suspect probably because of darkness or the victim had an eye problem when the crime was committed. In the main, a victim most likely remembers the voice of a suspect. An example is found in *S v Mahlangu* (2017) where the appellant robbed the victim at his house. The appellant demanded money, ransacked the victim's home and drew money from the victim's bank account from a nearby ATM. During the robbery, the appellant

asked the victim he recognised him as he had previously worked for him. The victim pretended as if he had not recognised the appellant to save his life. The complainant identified the appellant in an identification parade through his voice after he was apprehended. Section 37(1) of the Criminal Procedure Act 51 of 1977 was applied to conduct an identification parade. The voice was part of the marks and characteristics of the body. If a parade is properly conducted, voice evidence is acceptable as credible and reliable proof in South African courts.

Voice identification is more accurate when applied to a known suspect, and it is much easier to recognise a known individual's voice than a stranger's voice in identification. Hearing the voices of people not known to a victim for identification purposes is both frustrating and terrifying because the victim is traumatized or shocked when the incident occurs. Moreover, focusing on the voice memory that happened hours ago is difficult unless the victim knows the suspect.

#### **4.11 ADVANTAGES AND DISADVANTAGES OF FORENSIC IDENTIFICATION TECHNIQUES**

There are disadvantages and advantages of using forensic identification techniques which are contained in the following Table 4.

**Table 4: Advantages and disadvantages of forensic identification techniques**

<b>Advantages</b>	<b>Disadvantages</b>
<ul style="list-style-type: none"> <li>• is highly accepted in the legal community (Pakutharivu &amp; Srinath 2015:01). The researcher thinks that fingerprint identification is used to link a suspect and the particular weapon or object used by a suspect to commit a crime.</li> <li>• It is a cost-effective, quick, reliable and most convenient way to identify a person's fingerprint (Pakutharivu &amp; Srinath, 2015:01).</li> </ul>	<ul style="list-style-type: none"> <li>• Undocumented immigrants cannot be traced easily. First-time offenders whose fingerprints are not visible in the said object or weapon criminals can cover their fingerprints with gloves, or even cut the marks of their fingerprints with sharp knives or scissors to avoid being traced.</li> <li>• In addition, Pakutharivu &amp; Srinath (2015:01) further emphasise that fingerprints may be damaged by accidents</li> </ul>

	<p>in industry with caustic or hot materials which fingerprints.</p>
<ul style="list-style-type: none"> <li>• DNA can be useful mostly in crimes involving physical contact with a victim just like fingerprints, people have different types of blood cells and bodily fluids which can be linked to the person involved.</li> <li>• It has captured the public imagination as a way of convicting serious offenders (McCartney, 2013:31).</li> </ul>	<ul style="list-style-type: none"> <li>• DNA can be useless for people who are in a relationship or for crimes involving spouses, couples or friends DNA can be costly and take time to solve cases.</li> <li>• DNA can indicate sensitive information such as propensity to disease, hereditary markers, and familial relations with such information able to be derived from minute quantities of human tissue shed involuntarily by everyone (McCartney ,2013:31).</li> </ul>
<ul style="list-style-type: none"> <li>• The researcher thinks that line-up is good in allowing a victim to point out who he or she saw at the crime scene. Identification parade can be matched with the image of a person whom the victim has described to the artist who was drawing the suspect (if there is any).</li> <li>• It is very rare to find two different people from the same mother looking exactly alike, that's what makes the identification parade more useful.</li> <li>• Another advantage of the line-up mentioned by (Fitzgerald, Price &amp; and Valentine (2018:320) is that cases of mistaken suspects that were identified during the line-up are very rare.</li> </ul>	<ul style="list-style-type: none"> <li>• Line-ups are difficult to organize and control (Fitzgerald et al., 2018:321).</li> <li>• The first disadvantage of Line-up is that it is likely to increase witness stress and anxiety (Fitzgerald et., 2018:320).</li> <li>• If a line-up member does not contain a feature from the description, a witness could eliminate this person because they cannot recognise him/her. But if all the line-up members possess each of the features from the description, the witness is forced to go beyond the information about the culprit they already provided and rely on recognition memory to make the identification (Fitzgerald et al., 2018:320).</li> <li>• Even witnesses who were not victimized may find live line-ups stressful. Stress may have negative implications for the</li> </ul>

	<p>identification response (Fitzgerald et al., 2018:320).</p>
<ul style="list-style-type: none"> <li>• The researcher would like to further point out that photo identification is more like line-up, in this process the investigators focus more on the photo than on actually seeing a suspect in a line-up, so they can easily link what they see in a photo to actually what they see in real and photos can be stored for future references so hence when they stored in their original form, they can always be used in future to identify the suspect.</li> <li>• In addition, Fitzgerald et al., (2018:321) highlighted that photo and video line-ups are more practical, fairer, and seem to be no less reliable than live line-ups.</li> </ul>	<ul style="list-style-type: none"> <li>• Given modern technology, photos can be photoshopped, so it is very important to keep up with rapidly changing technology. Photos can be leaked which can interfere with the proper investigation of a case computers also make it difficult to store photos, which can be tempered by other colleagues, or anyone who accesses a computer like cybercriminals.</li> </ul>
<ul style="list-style-type: none"> <li>• Voice Identification just like body and fingerprints are bodily features which distinguish different types of settings; however, voice is different in that it involves listening rather than seeing a photo or identifying a person. Voice mostly includes recording which can be stored for future reference.</li> </ul>	<ul style="list-style-type: none"> <li>• Since voices depend so much on recording, they have to be clear which means everyone, in some cases, has to understand the tone and meaning. Voice recording can sometimes be classified as hearsay if not recorded but rather demonstrated by a person. Voice identifications are difficult to identify since two people although not have one similar voice, can however be close to sounding familiar. However, many criminals (especially in serious crimes) plan their crimes so they know what is expected of them in the commission of their crimes, which makes them say or talk less to each other such can hinder the recording</li> </ul>

	process or victim hearing what suspect is saying or their tone of voice.
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Source: Researcher

#### **4.12 SUMMARY**

In criminal investigations, forensic identification techniques are extremely useful. Identification techniques involve crime scene management, which, if done correctly, can be a huge help in identifying evidence. Managing a crime scene entail securing and documenting it to avoid accidentally damaging evidence. Only authorised personnel such as first responders, detectives, and forensic specialists, are permitted at a crime scene. Various techniques can be applied to record a crime scene during the search for evidence, including photographic documentation, video documentation, and sketches. Personnel permitted at the crime scene are expected to wear full personal protection equipment to protect the evidence. Evidence is classified into two types: biological evidence and physical evidence (tangible evidence obtained at the scene of crime). Fingerprint identification, DNA identification, and eyewitness identification, which includes show up, line up, photo and voice identification, are examples of identification techniques. They all play an important role in the forensic identification process.

## **CHAPTER FIVE: GENDER-BASED VIOLENCE**

### **5.1 INTRODUCTION**

Gender-based violence is one of the problematic violations of human rights that South Africa faces. Not only South Africa but the whole continent. In the past, gender-based violence was tolerated as most victims were afraid of speaking out because of fear of being judged by communities. People tolerate abusive patterns by their partners, and it ends up as a norm that the abuser has the right to treat the victim as an object. This form of crime is becoming more prevalent young girls disappear and a few days later they are discovered raped and murdered by unknown perpetrators. If not raped and murdered, they are trafficked to other countries for forced labour, sex or body parts mutilation. To date, these incidents happen every day in our communities. The World Health Organization (2015) indicates that globally 1 in every 3 women have either been beaten, forced into sex or abused usually by someone they know. Around 641 million women worldwide have experienced physical and sexual violence from a romantic partner. Approximately 38% of murders of women globally are committed by their close partners. The World Bank estimates that, in some countries, violence against women can cost up to 3.7% of the country's GDP in lost productivity. Thus, gender-based violence impacts on the capacities of many families.

Ministry of Health, Community Development, Gender, Elderly and Children (MOHCDGEC) (2017:9) states that violence directed against a person based on their gender is gender-based violence (GBV). It includes acts that cause physical, mental or sexual harm and suffering as well as threats of physical, mental or sexual harm, coercion, and other lack of liberty. Furthermore, gender-based violence is more common among young girls in South Africa, for instance, the case of Uyinene Mrwetyana which took place inside a post office in Claremont, Cape Town. In this incident, the accused confessed to the murder and the confession led the police to where the victim body was dumped. This was disclosed in court. In this instance, it appears that a student went to the post office to enquire about a parcel but was told by the accused to come back later because there was no electricity at the time. The victim returned and the accused was alone at the post office. The accused locked the door, assaulted and allegedly raped the victim who fought back. When the victim screamed, the accused took a weighing scale from the post office

and hit her. The suspect dumped the victim's body in Lingeletu West. Blood was identified inside the post office and on the suspect's shoe when he was arrested (Cruywagen, 2019).

In this instance, Forensic Identification methods were used to prove that indeed a suspect committed the offence before he confessed. The blood on his shoes was used to link the suspect and resulted in a successful prosecution. The study evaluates the use of forensic identification in the investigation of gender-based violence. The problem statement and categories of gender-based violence are discussed in this chapter.

## **5.2 GENDER IN OUR SOCIETY**

The term "gender" is mostly used to differentiate between females and males. According to the Community Workers Guide (2015:10), gender is linked to the socially defined roles given to males and females. The Ministry of Health, Community Development, Gender, Elderly and Children (2017:7) described gender as a socially defined facet of an individual's identity. Gender is taught, learnt and reinforced by the society an individual belongs to. Gender is defined irrespective their biological differences.

De Villiers Graaff (2017:12) revealed that a person's gender is influenced by race, class, language, religion and geographic region although sometimes gender and sex may coincide. A person's gender can be influenced by societal factors. Djamba & Kimuna (2015:20) notes that the use of violence is influenced by values individuals acquire through socialisation. The perpetrators of violence and the victims can treat abusive deeds as acceptable practices. Victims may be embarrassed to report the abuse they encounter, for example, in societies where wife beating is common and socially accepted, women may be ashamed to report abuse. Dlamini (2021:583) emphasised that gender inequality is one of the main causes of GBV that causes harm to victims and the society. Health crises and GBV can be addressed through reducing these human rights violations. Economics that promote inequality of citizens especially women and girls can deprive society of prosperity and human dignity. Governments should promote policies and funds that empower women economically and ensure equal access to land, quality education, health, proper sanitation and safety for women and girls. Moreover, gender inequality is influenced by the dynamics of intimate partners. These dynamics also influence

citizenship and subjecthood as well as interpersonal and intrapersonal relationships (Akgul, 2017:120).

### **5.2.1 “Violence”**

Violence is a forceful way of acting or saying something to harm other people emotionally or physically. Ministry of Health, Community Development, Gender, Elderly and Children (2017:8) defined violence as a deliberate use of physical force that can be threatened or actual use of force against oneself, another person, or a group or a community. The use or threat of using force either cause or has a high potential to cause injury, death, psychological harm, mal-development or deprivation.

### **5.2.2 Forms of Violence**

There are several types of violence, including economic abuse, psychological abuse, and physical abuse. Violence affects people at times in such a way that victims are unwilling to talk about it with their closest friends or family members. Resource Guide (2018:02) explained that the forms of GBV also include physical, sexual, psychological harm or suffering to women. GBV also includes threats of physical, sexual, psychological harm or suffering to women, forceful or arbitrary lack of liberty in public or private life.

### **5.2.3 The Difference Between GBV and Violence Against Women**

GBV is directed against males and females and members of a community based on their gender. Violence against women is directed against females only. Violence against women includes all forms of GBV (National Gender and Equality Commission, 2016:17).

## **5.3 GENDER-BASED VIOLENCE IN SOUTH AFRICA**

Gender-based violence is a major issue that South Africa is dealing with. People’s rights get violated daily by their spouses, families, and neighbours. Raping, murdering, and abusing women and children has become a norm in our societies. Due to a lack of knowledge about GBV, most people are unaware that they are victims of GBV. South African Human Rights Commission (2018:3) revealed that about 21% of women above 18 years old have experienced violence inflicted by a partner and about 6% of women have experienced sexual violence inflicted by a partner. However, these numbers may be inaccurate because many cases of GBV are not reported. The violence that is directed against a person based on their gender is called gender-based violence (Dlamini,



2021:583). GBV includes emotional, physical, mental or sexual suffering, threats of emotional, physical, mental or sexual suffering, coercion and other deprivations of liberty.

### **5.3.1 The Victims of GBV**

According to Britton (2020:13), gender-based violence can affect anyone. While GBV is influenced by gender, racial, social, economic and political power that are enshrined in institutions, practices and oppressive such that they are treated as normal. However, GBV can also be perpetrated on female and male sex workers, men who can have sex with other men, transgender people and those who are gender non-conforming. Women, adolescents and children are the more vulnerable to GBV although it affects women, men, boys and girls (Ministry of Health, Community Development, Gender, Elderly and Children, 2017:9). GBV can manifest as gay-bashing or 'corrective rape' that is used as punishment for disobeying societal customs. GBV also includes violence that is allowed because it favours a certain gender over others (De Villiers Graaf, 2017:21). The researcher thinks that gender-based violence is targeted to anyone that is, each person can be affected by GBV regardless of the status, gender or race and the experiences are not the same. It is only that female victims' instances are recorded in greater numbers than male victim cases.

### **5.3.2 Gender-based Violence Prevention**

Most countries have GBV interventions in place, and the most crucial goal to achieve is to educate people about gender-based violence; People must first comprehend the concept of gender-based violence. Societies must band together to combat GBV by exposing the perpetrators. Community Workers Guide (2015:17) states that GBV violates universal human rights that are protected by international agreements. GBV is illegal and condemned by national laws.

Molin (2018:06) states that GBV continues to negatively impact on people's lives and burden public health systems and community welfare worldwide. Effective prevention of GBV requires everyone's effort as individuals in their relationships. In addition, humanitarians also have an influence disaster response practice that can effectively secure the safety and dignity of individuals and achieve a world where gender equality is valued.

### **5.3.3 Legislation to Combat Gender-based Violence**

The Community Workers Guide (2015:22) notes that perpetrators of GBV are motivated by maintaining privileges, power and control over other gender groups. GBV may cause power relations that are characterised by inequality. GBV also results in disregard for human rights, gender equality, democracy and non-violent means to resolve to solve disputes. Allen (2018:4) highlighted that the ability of men to dominate over women is the main cause of GBV that is motivated by maintaining dominance. In addition, failure to implement a fully intersectional approach to GBV has resulted in poverty and substance abuse by partners in South Africa. (SAHRC 2018:4) argue that South Africa has advanced laws and policies to combat GBV and sexual-related violence. These laws include the Domestic Violence Act 116 of 1998 and the Criminal Law (Sexual Offences and Related Matters) Amendment Act 32 of 2007. These laws are explicit of constitutional rights that include equality, human dignity, life, freedom and security of people.

## **5.4 GENDER-BASED VIOLENCE IN NEIGHBOURING COUNTRIES**

### **5.4.1 Gender-based Violence in Zimbabwe**

Intriguingly, the scourge of GBV largely affects women. For example, almost half of women in Zimbabwe suffer from gender-based violence and currently, the government is stepping up efforts to curb the scourge. The Country's Home Office (2018:22) claims that the proportion of gender-based violence incidents has increased, according to a Zimbabwe demographic health survey, prompting the formation of an anti-domestic violence committee. Zengenene & Emy (2019:83) indicated that violence against women is a worldwide challenge. Women and girls in Zimbabwe are exposed to a hostile environment including a hostile political environment. The status of women and girls is worsened by demographic decay and the hostile political environment. GBV is relatively high in Zimbabwe. It intersects with other health and social issues that include high rates of HIV infection and sexually transmitted diseases as well as alcohol and drug abuse (Waterman, Edwards, Makoni, Siller, Murphy & Wagman, 2020: 2).

Home office (2018:25) a policing structure has been added in Zimbabwe to ensure access to justice by survivors of GBV. The additional structured is intended to overcome barriers to making complaints by victims. The Victim-friendly unit was established in 1995 to deal

with cases of violence against women and children. Although it started as a pilot project, every Police Station in the Zimbabwe now has a Victim-friendly unit. Zengenene & Emy (2019:83) mentioned that to improve the situation for women in Zimbabwe, attention should be directed towards reducing GBV. Moreover, according to the protocol, the Victim-friendly unit is responsible for investigating, arresting offenders, handling cases of abuse and ensuring justice for the victims of GBV. One weakness of the system is that, sometimes victim and perpetrator are interviewed at the same time thereby causing more fear to the victim (Home Office, 2018:26).

#### **5.4.2 Gender-based Violence in Botswana**

According to Briefing Note (2019), GBV prevalence levels in Botswana are severely underreported. Only 1 in every 9 women who were raped reported to the police in Botswana. In 2018, the number of women who were raped was 24 times higher than the number of reported cases reported. Underreporting of GBV is a global issue as evidence show that GBV prevalence rates that are based on health systems data or police reports underestimate the scale of the problem. On a global scale, approximately 7% of women formally report experiences of violence.

Gender-based violence is a global problem that faces communities. In July 2018, Botswana, as a Southern African Development Community (SADC) member, approved the regional strategy and framework of action for addressing gender-based violence 2018-2030. The SADC Gender Policy suggests that member states consider developing evidence-based strategies that include education, prevention and victim assistance (Botswana Universal Periodic Review, 2020:24).

#### **5.4.3 Gender-based Violence in Namibia**

For years, GBV has dominated media coverage daily and political agendas. In Namibia, women are the main victims of GBV. Women account for 94% of all complainants of rape in Namibia. An average of between 1100 to 1200 rape cases are attempted each year. It is alarming that over a third of all rare complaints are reported by women under 18 years old. Violence is more common among intimate partners (The Voice of Survivors 2015: 8). Moreover, domestic violence in Namibia is a social issue of major concern, as the country is influenced by a culture of male domination. Approximately 1 out of every 3 women has

reported physical, sexual and emotional abuse by an intimate partner in her lifetime (Selebono, 2019:1).

Namibia has one of the highest rates of GBV in the SADC region. Due to increasing rates of GBV, the Namibian government has reinforced and established institutions and service providers to deal with GBV. The support to these institutions is in the form of government policies and financial support (The Voice of Survivors, 2015:8). Society now understands the difference between violence against women and other forms of violence. GBV is mainly influenced by sociocultural factors that entrench negative beliefs about women and 'standard' gender dynamics (Alweendo, Andreas & Rafla-Yaun, 2018:2).

The Voice of Survivors (2015:8) states that Namibia integrated GBV into national legislation. The Gender policy of 1997 indicates that all acts of violence directed against women and children violates Article 8 of the Namibian Constitution. Many organisations and institutions provide resources that include legal protections, counselling services and awareness to victims of GBV including women and gender non-conforming people. Despite the work already being done, incidents of gender-based violence appear to be on the rise (Alweendo, Andreas & Rafla-Yaun, 2018:2).

#### **5.4.4 Gender-based Violence in Kenya**

Kenya ranks among African countries where GBV is on the rise. Similarly, GBV is a serious public health problem in Latin America and the Caribbean. GBV has triggered several policies on sexual offences, childcare and protection and domestic violence. However, similar to Kenya, enforcement of these policies in Jamaica has been challenging (Korir, Mohamedali, Makokha, Asienwa, & Mbaya, 2016:4). The Eastern and Southern Region has a high rate of sexual abuse and harassment. In Kenya (girls 32% and boys 18%), in Malawi (girls 22% and boys 15%) and in Tanzania (girls 30% and boys 13%). Therefore, Otieno (2020) indicates that GBV encroach upon essential rights to life, liberty, security, dignity and non-discrimination as well as physical and mental integrity, and therefore they violate the constitution of Kenya (National Gender and Equality Commission, 2016: 45). There are several weaknesses to the Kenyan approach for prevention and response of GBV. The major weakness of the Kenyan approach is poor co-ordination between sectors that deal with GBV which creates many inefficiencies

(Neetu, Charlotte, Mwangi and Raval, 2021:60). However, its strength is the approach is that the government of Kenya recognises the importance of a coordinated multi-sectoral response to GBV that includes health, police, judicial and social services and is supported by several policy documents.

Korir et al., (2016:13) state the enactment of the sexual offences ACT (2006) in Kenya has resulted in progress in policy and legislative frameworks to combat GBV and other health-related human rights. Several laws that include the HIV and AIDS Prevention and Control Act (2006), the Prohibition of female genital mutilation ACT (2011), the Employment Act (2007), and the national policy on the prevention and response to gender-based violence (launched in 2014) among others contribute in the fight against GBV (Korir et al., 2016:13).

#### **5.4.5 Gender-based Violence in Palestine**

Sadiqi and Reifeld (2016:10) state that violence is a serious and prevalent problem in the Palestinian family in Israel. The problem of GBV in Palestine is mostly recognised by Arab feminist organisations. A number of Arab feminist organisations have been established in the past two decades to deal with GBV. In addition, the patriarchal nature of Israeli society has allowed violence to persist in whole is a society. The victims of violence are afraid to report to the authorities because of the unfavourable attitude of the authorities that sometimes leads to death of the victims (Sadiqi & Reifeld, 2016:20).

### **5.5 TYPES OF VIOLENCE**

Types of violence include sexual, physical, psychological/ emotional, social and economic violence as explained in Table 5

**Table 5: Types of violence**

<b>Types of violence</b>	<b>Definitions</b>
➤ Physical violence	Refers to the deliberate use of physical force with the potential to cause death, disability, injury or other harm. Acts of physical violence include scratching, pushing, shoving, throwing, grabbing, biting, choking, shaking, slapping, punching, burning and use of a weapon, restraints, or one's body size or strength against another person (Ministry of Health, Community Development, Gender, Elderly and Children, 2017:10).

<ul style="list-style-type: none"> <li>➤ Emotional violence/Psychological</li> </ul>	<p>Emotional abuse is a technique used to exert power over another person by criticizing, humiliating, blaming or otherwise manipulating them with their emotions. In general, a relationship is considered emotionally abusive when a pattern of abusive language and bullying actions wears down a person's self-esteem and jeopardizes their mental health (Bhanu, 2021:10).</p>
<ul style="list-style-type: none"> <li>➤ Sexual violence</li> </ul>	<p>Is any sexual act, attempt to obtain a sexual act or other act directed against a person's sexuality using coercion, by any person regardless of their relationship to the victim, in any setting, it includes rape-defined as physically forced or otherwise coerced penetration of the vulva or anus with a penis, other body part or object, attempted rape, unwanted sexual touching and other non-contact forms (WHO, 2015).</p>
<ul style="list-style-type: none"> <li>➤ Economic violence</li> </ul>	<p>Economic abuse includes behaviours that control a victim's ability to acquire, use and maintain resources thus threatening her economic security and potential for self-sufficiency, economic abuse incorporates behaviours that control both what the victim can and cannot do. Economic abuse occurs when the abuser gains complete control over the victims' financial resources (Stylianou, 2018).</p>

Source: Researcher

**5.6 VIOLENCE AGAINST WOMEN**

Violence against women is the most common form of GBV in which men rape, murder, or emotionally abuse women. Women are the most vulnerable victims largely because they are unable to physically fight back against the perpetrators. Similarly, Newburn (2017:884) states that women are more likely to have experienced intimate violence than men across all categories of crime, although the differences in non-sexual abuse are less pronounced compared to other categories. The most commonly reported form of intimate violence is that inflicted by a non-sexual partner. According to the Community Workers Guide (2015:17), violence against women is an infringement of human rights and discrimination of women. It includes physical, sexual, psychological, economic harm to women and arbitrary denial of liberty in public or private.

According to SAHRC (2018:20), despite being among the first countries in the world to recognise that sexual orientation and gender identity can be grounds for discrimination, violence against women, gender identity and gender expression remain prevalent in

South Africa. Homosexual and transgender women residing in rural areas are mostly exposed to violence. Lesbians are commonly subjected to threats and “corrective rape”, that is a brutal hate crime to “cure” lesbians from homosexuality. The World Health Organisation (2015) indicates that Violence against women is preventable. The health sector has an important role to play in providing comprehensive health care to women subjected to violence and an as entry point for referring women to other support services they may need. Most of this violence is intimate partner violence. Worldwide, almost one-third (2%) of women aged 15 - 49 years who have been in a relationship report that they have been subjected to some form of physical and/or sexual violence by their intimate partner. De Villiers Graaff (2017:20) highlighted that violence against women is seldom recognised as a crime. Only physical violence outside the home or perpetrated by those known to the victim is included problematically. Domestic violence or rape within a marriage tends to be treated as a ‘private’ affair and is not classified as violence that needed to be prosecuted.

### **5.6.1 The Impact of GBV in Our Societies**

Gender-based violence has claimed the lives of many women, as well as mentally and emotionally disturbed children who have witnessed or been victims of it. In many cases, women are discovered raped and murdered by known and, in most cases, unknown suspects. Alweendo et al., (2018:03) mentioned that the impacts of GBV are many and complicated of course. The survivors of the violence suffer the trauma and indignity of the event, and whatever physical injury that might result. GBV can also result in death, such as in the instances of intimate partner femicide. While there are resources available to help those who have experienced violence, gender discrimination towards women and their resulting lower socio-economic status meaning that women have fewer options and resources at their disposal to avoid or escape abusive situations and to seek justice.

World health Organization (2015) indicate that lockdowns during the COVID-19 pandemic and its social and economic impacts have increased the exposure of women to abusive partners and known risk factors while limiting their access to services. Situations of humanitarian crises and displacement may exacerbate existing violence such as by intimate partners as well as non-partner sexual violence and may also lead to new forms

of violence against women. Aghtaie & Gangoli (2015:38) think that men's violence toward women known to them may develop in association with feelings of threat when women do not do what men expect, in terms of childcare, housework, paid work, sexuality, and so on. The fact that there are violent men is not the product of certain psychological traits all men can be violent. However, it is certain men who commit violence to women known to them and these men may lash out when threatened in terms of material power and or rigid ego boundaries.

## **5.7 FEMINISM THEORIES**

Hadi (2017:298) notes that feminism was established to fight for equality in communities; the aim of feminism is that males are equal to females. The main focus was not only fighting equality but also fighting the rights of females. Feminists rejected the belief that males have more power than females and emphasised that everyone is equal regardless of gender. In the past, in some countries, males had more power than females. Such power gave them the idea that they owned females in such a way that they had the right to control them and do as they wish. Furthermore, feminism opposes patriarchy and sexism by advocating for social equality for men and women. Allen (2018:9) indicated that feminism, which was once described as a system that excluded black and lower-class identities, was later redefined as the equality of men and women during the second wave of feminism. Kaladelfos & Featherston (2014:234) state that feminist activists staged campaigns highlighting the various forms of violence against women and the frequency of its perpetration. In the 1970s and 1980s, activists campaigned against sexual assault and domestic violence and worked towards establishing safe spaces including women's refuges and rape crisis centres. However, feminism brings differences towards the way people think and ACT, feminism is a movement that has several branches all with the same focus on women expressing themselves since they have their autonomy (Puspitasari, 2016:1). In law, feminist scholars worked towards reforming approaches to crime against women, restructuring statutory definitions of sexual violence, including protections for female victims within the court, the recognition of rape within marriage and most recently, putting forward alternatives to the adversarial criminal trial for prosecutions of sexual violence (Kaladelfos & Featherston, 2014:233). Feminist



scholarship has shown the fundamental relationship between acts of and responses to violent behaviours and gendered social structures while recognition of sexual and gender-based violence continues to be hampered by social, political and institutional views of what constitutes “true” violence (Kaladelfos & Featherston, 2014:234). Feminism is a diverse, competing and often opposing collection of social theories, political movements and moral philosophies largely motivated by or concerning the experience of women especially in terms of their social, political and economic inequalities (Enyew & Mihrete, 2018).

### **5.7.1 Radical Feminism**

According to Cottais (2021), men oppress women through patriarchal appropriation. Patriarchy refers to a system in which the male social group holds the economic and political power, whether in the family or within society and has control over the female social group (over their bodies, their work, their sexuality etc.) resulting in the total subordination of women to men. Moreover, Radical feminism differs in their interpretations of the basis of patriarchy, but most agree that it involves the appropriation of women’s bodies and sexuality.

Hadi (2017:298) posits that a radical feminist believes that patriarchy is so deeply rooted in society that even a socialist revolution would not end it. Instead, reaching the goal of gender equality means that society must eliminate gender itself. Cottais (2021) emphasised that radical feminism is also constructed to challenge liberal and Marxist feminism. Liberal feminism demands only equal rights, while Marxist feminism confines itself to the economic analysis of the oppression of women and believes that the abolition of capitalism is enough to liberate women. Radical feminism seeks to address the root causes of patriarchal oppression. Contrary to liberal feminism, radical feminism sees women as a collective group that has been and still is oppressed by men.

### **5.7.2 Marxist Feminism**

Marxist feminism differs from radical feminists by their explanation of the roots of women’s operation with class analysis. Gender inequality derives from men’s domination over women’s labour in the capitalist system rather than from an autonomous system of patriarchy (Hadi, 2017:299).

### **5.7.3 Socialist Feminism**

Socialist feminism being rooted in the socialist tradition, views that capitalism strengthens patriarchy by concentrating wealth and power in the hands of a small number of men. The family form created by capitalism must change if we are to replace “domestic slavery” with some collective means of carrying out housework and childcare (Hadi, 2017:299). State feminism in South Africa is increasingly aligned with carceral approaches to social problems, in which violence and abuse are treated as legal issues that require arrests, prosecutions, punishment of perpetrators and protection of survivors (Britton, 2020:10). Carceral feminism focuses on criminalizing and incarcerating perpetrators, often at the expense of other feminist agendas that focus on economic injustice, racial discrimination, and gender inequality, feminist movements to address these structural barriers and inequalities are side-lined to focus on the criminalization of sexual assault, rape, and domestic violence (Britton, 2020:10).

### **5.7.4 Liberal Theory**

Liberal theory is a feminist theory that believes gender inequality is created by lowering access for women and girls to civil rights and allocation of social resources such as education and employment. This situation is mainly centred on the socially constructed ideology that perpetuates inequality between the two sexes. Liberal feminism is derived from the liberal political philosophy of the Enlightenment period, and centres on the core ideas of autonomy, universal rights, equal citizenship and democracy (Enyew & Mihrete 2018).

## **5.8 GENDER-BASED VIOLENCE IN A WORKPLACE**

Pillinger (2017:01) views violence and harassment against women and men in the world of work as an abuse of power. Violence and harassment particularly affect workers in the most vulnerable work situations who have poor access to labour rights such as freedom of association, collective bargaining, decent work, non-discrimination and access to justice. According to the researcher, in South Africa, there exists a workplace culture whereby one gender exploits their positions for personal gain. In most organisations, there are allegations that Employees in high management positions have sought sexual

favours from the other gender before offering those jobs or promotions. That is another part of gender-based violence and sexual harassment.

Mbandlwa (2020:8) states that GBV is far from over because society and law enforcement agencies focus on the symptoms and not the real problem. The real problem of GBV that needs to be addressed is mental and emotional abuse compared to physical abuse. Taket & Crisp, (2018:07) believe that preventing gender-based violence requires recognising intersectional interactions and responding to them when designing interventions across the whole spectrum of responses required to gender-based violence, from primary prevention to services to respond to the needs of those who experience gender-based violence as well as those who perpetrate.

## **5.9 CAUSES OF GENDER-BASED VIOLENCE**

A high percentage of violence committed worldwide is perpetrated by men and the causes of violence have long been debated. The fact that men are the primary perpetrators is true of all forms of violence. De Villiers Graaf (2017:20) further mentioned that the root causes of gender-based violence are the discrimination between the sexes and society's response to such discrimination. The discrimination by gender led to placing women and men in roles and power positions where women are treated as inferior to men. The accepted gender roles and lack of social and economic value for women and women's work strengthen the view that men have decision-making power and control over women (Community Workers Guide, 2015:22).

Allen (2018:4) states that the subordination of women due to their diminished status in society as compared to men is an innate factor of gender-based violence, and these patriarchal norms of female subordination encourage and promote the occurrence of gender-based violence. De Villiers Graaff (2017:34) points out that others believe that violence results in witnessing violence during the conflict and that became the norm in the post-conflict period. Furthermore, male violence in the family is an expression of male domination; violence is inextricably linked to all acts of violence in this society that occur between the powerful and the powerless, the dominant and the dominated. While male supremacy encourages the use of abusive force to maintain male domination of women, it is the Western philosophical notion of hierarchical rule and coercive authority that is the

root cause of violence against women, of adult violence against children, of all violence between those who dominate and those who are dominated (Allen, 2018:10).

According to the South African Human Rights Commission (2018:3), in May 2017, the issue of gender-based violence (GBV), and in particular the extreme cases of femicide, hit the headlines in South Africa after several young women were murdered. A great concern, however, is that a major contributor to gender-based violence in the country could be socio-cultural factors that perpetuate certain beliefs about women and expected gender norms relating to them, which can be used to justify violence against women as opposed to holding the perpetrators fully liable for their actions. Moreover, the negative impacts of gender violence are multi-fold, including various poor mental and physical health effects (Allen, 2018:5).

#### **5.10 SUMMARY**

Gender-based violence is mostly perpetrated by both genders (male and female), but violence against women is most committed in a country, as a result the country experiences more cases of rape, murder and other crimes like human trafficking of young girls and adults and female genital cutting.

Gender-based violence is more about power especially when men want to dominate and have more control in homes while the economy favours neither gender. In most households nowadays, a wife can work and earn a higher salary than her husband, and she can contribute the most on bills, including the children's school fees. Is it largely these that cause some men to get intimidated and frustrated and trigger them to be violent to the other gender because they feel powerless? Societies have given men too much power in such a way that they feel offended when a woman takes their responsibilities. In contrast, there exists gender-based violence that is directed towards males and is perpetrated by very controlling women, women who take advantage of a respectful man. These kinds of women want to play both parts of being a man and a woman. They do not want the other gender to play their role of being a man and they tend to always have something against men. These kinds of women abuse men physically, emotionally, and more especially financially, and such cases are ignored in our societies and go unreported. Most other forms of GBV are committed by serial rapists and murderers who

target only females, regardless of whether they know that female or not. Gender-based violence can be prevented by educating our societies, offering rehabilitation programs for perpetrators and also victim empowerment programs.

## **CHAPTER SIX: PRESENTATION AND INTERPRETATION OF FINDINGS**

### **6.1 INTRODUCTION**

This chapter presents and interprets the findings of the study on forensic identification techniques used to investigate GBV. The research aimed to explore different forensic identification techniques that can be used in GBV and to test if detectives who deal with GBV cases know forensic identification techniques. The participants contained 15 detectives from Gauteng (Pretoria) which include Pretoria Central, Pretoria North, Mamelodi and Ga-Rankuwa FCS. The previous chapters deeply explained the forensic techniques that are used in cases of GBV such as rape and murder and the researcher further elaborated about explaining the problem of GBV that it is an international problem by further comparing other sister countries.

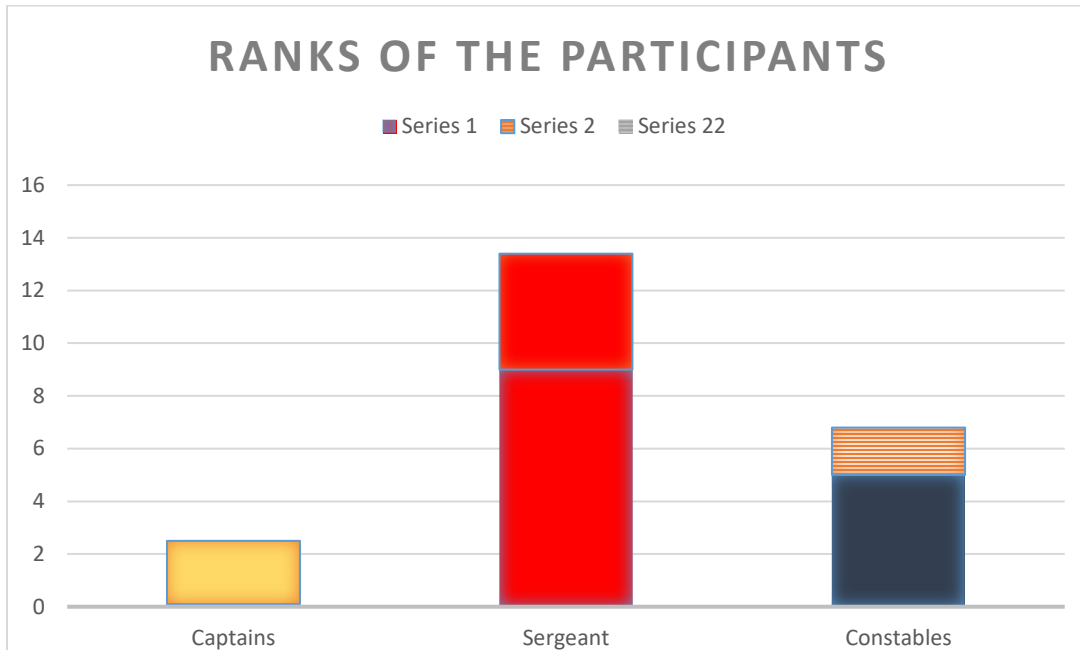
Data contained in this chapter was obtained from the participants during interview questions that were conducted telephonically and face-to-face (**see Annexure A**). The data collected is analysed and presented using themes that are contained in the following paragraphs. The participants' ranks, level of education, experience and training within the field as contained in section A of the questionnaire were captured during interviews.

### **6.2 HISTORIC BACKGROUND OF PARTICIPANTS**

Under the historical background section of this chapter, the researcher provides answers to the participants when interviewed in section A. All participants that were included in the study took part voluntarily and all participants were treated equally by answering the same questions that were asked during the interviews, and the participants' privacy was protected at all times.

All 15 of the participants were asked the first question: "*What is your rank*"? The following answers contained in the diagram presenting the number of participants that took part in the research were obtained.

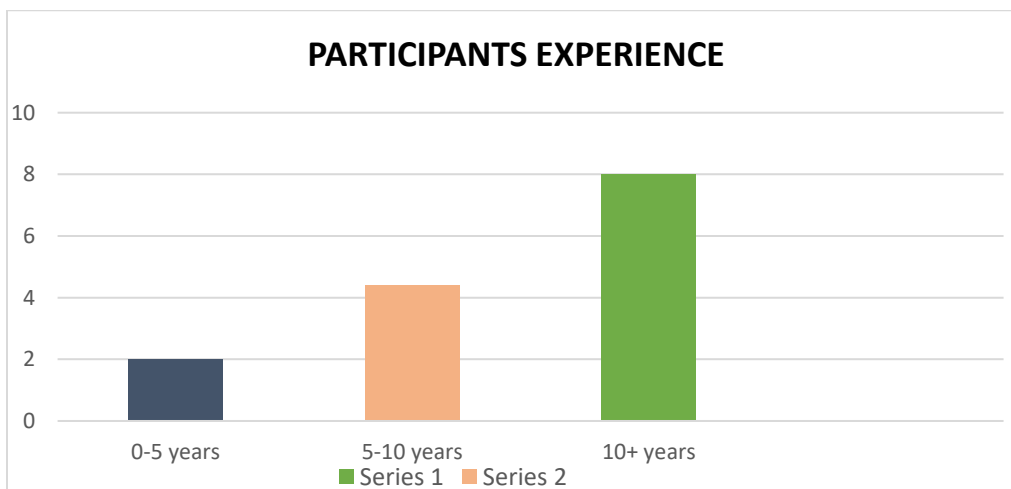
**Diagram 6.1**



Source: Researcher

The following question contained in section A was: *“How long have you been working as a detective?”* The purpose of this question is to determine the level of experience the participants have in the field of SAPS. The following diagram presented below represents the responses of the participants, 0-5 years (02), 5-10 years (08), and 10+ years (05).

**Diagram 6.2**



Source: Researcher

The third question that was asked in the interview schedule contained in section A was: “*Are you currently investigating crime involving gender-based violence?*” The question was asked to establish if all the research participants met the requirements because detectives who deal with GBV ought to have a clear understanding of the questions contained in the section. All the participants responded that they dealt with investigations that strictly involved GBV.

The fourth question was “*How many years have you been investigating crimes involving gender-based violence?*” The responses were as follows: 1-5 years (4), 5-10 years (3), 10 years and more (8). Table 6 presents the number and experience of participants.

**Table 6: The number and experience of participants**

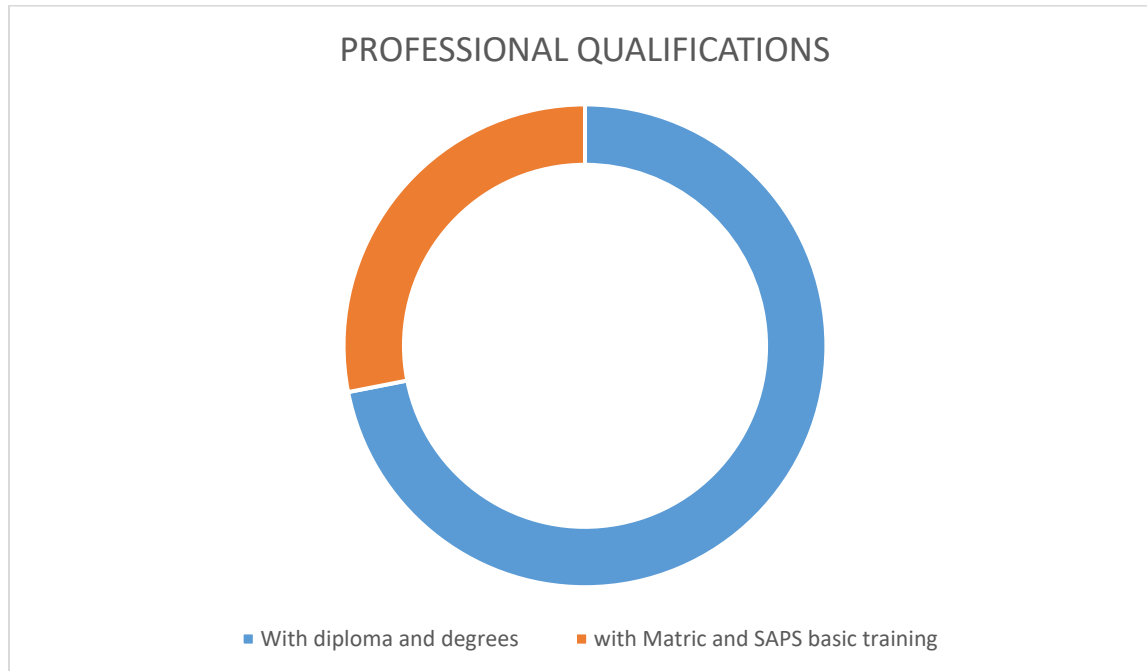
<b>Experience</b>	<b>Number of participants</b>
1-5 years	4
5-10 years	3
10+ years	8

Source: Researcher

The fifth question contained in section A was about the educational background of the participants. The main purpose of this question was to get clarity on whether the participants had a theoretical background when it came to investigation. Educational qualifications especially related to investigation are believed to aid the officials in being effective and productive when it comes to investigation. Most of the criminal justice qualifications deal with South African law. The researcher obtained 09 participants who had relevant tertiary qualifications and 06 participants only had Matric certificates with SAPS training. The colour blue in the Doughnut diagram below indicates participants with qualifications and the orange indicates the one without professional qualifications.



### Doughnut diagram: 6.3



Source: Researcher

The sixth question was: “*Did you receive specific training regarding identification techniques in the investigation of gender-based violence*”? By asking this question, the researcher wanted to know if all the detectives working with GBV cases received training concerning the use of forensic identification techniques. Employee training is very crucial especially in GBV cases because they are very sensitive and require detectives who are fully equipped with all the kinds of investigative techniques that can help in solving the cases. Employee training refers to bridging the gap between the current performance and the standard desired performance. Training could be given through different methods such as coaching and mentoring, peer cooperation, and participation by the subordinates. This teamwork enables employees to actively participate on the job and produces better performance, hence improving organizational performance (Elnaga & Imran, 2013:139). The researcher observed that 10 of the participants had received training with the component of FSC within 4 police stations in Pretoria and 5 participants stated that they had not yet received any training regarding the use of identification techniques. Green in

the Doughnut diagram below indicates the number of detectives that were trained, and blue indicates the number of detectives that never received training.

### **Doughnut diagram: 6.4 Training regarding identification techniques**



Source: Researcher

The following themes contain the data collected from participants; all information was recorded as it is no modifications were done.

## **6.3 EMERGING THEMES AND SUB-THEMES**

### **6.3.1 Theme 1: Exploring participants' understanding of criminal investigation**

#### **Question 01: What do you understand about the Criminal Investigation?**

Being able to understand criminal investigation is extremely significant in the context of this study. From the literature reviewed in chapter two and responses from participants, it is clear that understanding the phenomenon does not only assist investigators of gender-based violence but also ensures the successful prosecution of perpetrators of this heinous crime. These have been confirmed by (Mozayani & Fisher, 2018:01), who highlighted the significance of understanding criminal investigation (See section 2.2). In addition, it is highly important that all crime scene investigators continuously attend refresher courses to be able to sharpen their investigative skills. This study aimed to explore criminal investigation and to educate investigators that every clue in the crime

scene tells a story and that every detail holds keys to justice, especially for gender-based violence. From the in-depth focus-group interviews, it became evident that the majority of participants understood the concept and they responded as follows: *“To prove all the evidence of a crime committed” (participant no:01). “A fact-finding of how, where, when, who and why a particular crime took place” (participant no:02). “Process of enduring that those who broke the law are successfully prosecuted” (participant no:03). “Is the investigation of crime whereby we identify the perpetrator, gather evidence regarding perpetrator and trace perpetrator brought him in books” (participant no:04). “Is an undertaking that seeks, collects and gathers evidence which may lead to a prosecution” (participant no:05). “It is the systematic search for the truth in an alleged offence” (participant no: 06 & 09). “Is any criminal conduct on suspected criminal conduct” (participant no7). “Is a system we use to prove the alleged crime” (participant no:08). “Is an applied science that involves the study of facts that are then used to inform criminal trials” (participant no:11) “All about getting the truth of incident” (participant no:13)”. “To ascertain the truth” (participant no:15).*

The literature presented by Bowen (2018:31) further confirms the participants' responses by adding that a criminal investigation involves police, attorneys and scientists. It is the job of police officers, detectives and/or crime scene investigators to report to the scene of a crime. Forensic scientists analyse the evidence that crime scene personnel have recovered. Furthermore, the literature discussed in section 2.2 including that by (Lochner & Zinn, 2015: 33; Houck & Siegel, 2015:24) stipulates that investigators must be well-versed in crime investigation and crime scene management. All the participants' responses indicate that they understood the meaning of criminal investigation as expected since their daily duties revolved around investigations. It would be advantageous if all investigators understood all intricacies related to the criminal investigation as this would ensure successful convictions of gender-based violence perpetrators. Interpretation of the second theme is presented next.

### **6.3.2 Theme 2: Exploring Participants' Understanding of Forensic Investigation**

In this section, the researcher explores the minds of participants, seeking to understand their perceptions, insights and knowledge surrounding the space of forensics. The

objective was to ensure that each perspective contributes to the collective understanding of forensic investigation. Moreover, this is intended to unravel the threads of forensic science, dissect the methods that piece together the puzzle of crime, and gain a deeper appreciation for the role it plays in the pursuit of the truth (Dutelle, 2014:06). The researcher aimed to explore the understanding of the participants on forensic investigation. In response to the question (Question 2: What do you understand about forensic Investigation?), participants responded as follows: *“That the accused can be linked through exhibit”* (participant no:01). *“A forensic investigation is the application of science into criminal investigation”* (participant No: 02). *“The process of applying science into investigation. Through Forensic Investigation they are certain special methods that are used to identify the offender”* (participant no:03). *“Are investigation aids we use to analyse all tangible evidence recovered at the scene of crime”* (participant no:04). *“What I understand is that forensic investigators come assist with collecting fluids”* (participant no:05). *“Systematic search of forensic evidence in an alleged crime”* (participant no:06). *“Is a practice of lawfully establishing evidence”* participant no:07). *“Gathering of forensic evidence”* (participant no:09). *“Is an investigation that involves some form of scientific method or skills, such as accounting or valuation expertise like DNA or blood sample”* (participant no:11). *“It is an intense investigation where science is used”* (participant no:12). *“Analysing a, comparing of exhibit for result”* (participant no:13). *“Determination about something happened in the past”* (participant no:14). *“L.C.R.C fingerprints, forensic science laboratory to DNA sample”* (participant no:15).

All the 14 participants positively answered the question, except for participant number 10 who was unable to provide an appropriate answer due to insufficient knowledge about the topic. Dutelle & Becker (2019:7) corroborated participants' responses by explaining that forensic investigation is the means of the application of forensic science to the process of investigating a criminal event, just as with law enforcement.

Literature by (Avramescu, 2021:164), shown in Section 2.2.1, highlights the fact that the main purpose of crime scene investigation is to fix and remove the traces created by the perpetrator, the means and tools used, as well as to clarify the circumstances in which a crime was committed or an event with judicial implications occurred. In addition, Braswell

(2015:61) highlighted the main objectives of forensic investigation (Section 2.3.1). From the participants' responses, it is evident that the majority of them understood forensic investigation and this provides assurance that these investigators were in a position to investigate gender-based violence properly. The interpretation of the following theme follows below.

### **6.3.3 Theme 3: Exploring Participants' Understanding of Evidence collected during the investigation of GBV**

According to the Locard Principle, "every *contact leaves a trail*". This means that, in every crime scene, perpetrators leave evidence which investigators must strive to locate, properly manage such evidence and ensure that evidence is presented to the court of law in its original (uncontaminated) state to be admissible as evidence. In this section, the researcher aimed to obtain participants' understanding of evidence and participant's responses to the question (Question 3: What do you understand about evidence collected during the investigation of GBV?) and they responded as follows:

*"It is all the evidence gathered from the criminal case that can be used against the accused"* (participant no:01). *"Material obtained in a crime scene example... bullet, hair, knife"* (participant no:2). *"Evidence is any tangible or biological items/ exhibits that are available from the crime scene"* (participant no:03). *"Information collected whether physically from the scene of the crime but will assist in leading evidence at the court of law"* (participant no:4). *"The available body of facts or information indicating whether a belief or proposition is true or valid"* (participant no:05). *"Anything that proves the existence of something"* (participant 06 & 09). *"Is a tool to indicate the truth or validity"* (participant no:07). *"Something that can be used to prove that the person is the one who committed the crime"* (participant no:08). *"A thing or things indicating whether true or valid"* (participant no:10). *"Anything that can be used to prove or disapprove the fact in issue"* (participant no:11). *"Proof"* (participant no:12). *"Proof of anything that is found on a crime scene"* (participant no:13). *"A means of proof, anything that tends logically to prove or disapprove a fact"* (participant no:14). *"Facts or information to prove the truth"* (participant no:15). The participants' responses indicated that they had a broad knowledge of the question. The researcher further asserts that evidence is divided into

many categories ranging from real evidence, documental evidence, and digital evidence. Literature by (Farajihha et al., 2016:1) highlights the fact that professionalism by investigators and crime scene techniques ensure the preservation of evidence. In addition, the literature discussed by (Joubert, 2018:403) emphasises that to investigate criminal cases effectively and ensure a just verdict in court, police officials must be able to present different types of evidence which may be either oral (when the witnesses appear in the dock to give the evidence); or real, that is, exhibits (when the evidence is an object which is proof of itself).

From this study's participants' responses, it is evident that they understood what evidence is. Presentation of the following theme is presented next.

#### **6.3.4 Theme 4: Exploring Participants' Understanding of Crime Scene and its management in investigation of GBV**

In this section, the intriguing journey into the heart of criminal investigation (crime scene) is presented. For this reason, the researcher embarked on an exploration to understand the participants' viewpoints to gain their insights about the crime scene. To this end, participants were required to shed light on the question (Question 4: In your own words what is the crime scene and its management in investigation of GBV?), and one participant said: *"a place where crime was committed"* without further elaborating. It is important to note that there are different categories of a crime which include primary crime scene and secondary crime scene which is explained more in detail in chapter two (Section 2.4). Crime scenes must be given special attention as they contain all the information that may be needed by the investigators. Special procedures must be followed when involved in crime scene investigation starting from safeguarding the crime scene. The literature discussed by Gardner & Krouskup (2019:10) highlights the fact that the actions of suspects, witnesses, first responding officers, EMS, the environment, and certainly those of the crime scene processor will result in the disturbance and alteration of the scene. For this reason, preventative measures to protect and preserve the crime scene must begin immediately. As soon as life safety issues have been resolved (is the environment safe for officers/firefighters/medical personnel to enter? Is the victim alive or deceased? Is the perpetrator still on the premises?). This assertion is emphasised by (Fish et al., 2014:23)

who highlighted that access to crime scenes should be restricted. While there was just one participant who contributed to the question, it is evident that the majority of participants understood what the crime scene was about. This is in light of what other authors (Mateen & Tariq, 2019:286); Bowen (2018:33) confirmed (See Section 2.3.3). The interpretation of the next theme follows below.

### **6.3.5 Theme 5: Exploring Participants' Views on the Role of an Investigator in the investigation of GBV**

In this section, a spotlight is shined on the diverse perspectives of participants regarding their understanding of the role of an investigator. It is important to note that not every police officer can be an investigator. Moreover, it is important to indicate that being an investigator requires special skills that ought to be upgraded continuously, for instance, by attending refresher courses. The researcher therefore aimed to dissect the multifaceted nature of crucial roles investigators should have in the pursuit of uncovering the truth in crime investigation.

In response to the question (Question 5: What is the role of an investigator in the investigation of GBV?), participants responded as follows: *"Prove the innocence of the suspect and collect evidence for the matter to be resolved" (participant no: 02)*. *"Collect relevant evidence and ensure that the victims or witnesses are interviewed" (participant no: 03)*. *"Make sure the victim gets counselling examined by a medical practitioner, interviewed by a qualified detective mainly a female investigator preferably in a victim empowerment centre or room" (participant: no 04)*. *"Is to investigate how the matter started where, when, how and why from there he can crack the case" (participant no: 05)*. *"To search for truth and evidence which is physical in an alleged crime" (participant no: 06)*. *"Is to find the truth (participant no: 07)"*. *"To search for the truth" (participant no: 09)*. *"To arrange medical treatment when needed" (participant no:10)*. *"To gather all evidence and relevant statement, compile the docket and further take the docket to court" (participant no:11)*. *"To secure convictions through investigation" (participant no:12)*. *"To follow up alleged information by complainant on the docket/ file" (participant no:13)*. *"To secure the crime scene, provide protection to the victim, interview or assist the victim in a victim friendly room in a sensitive manner, refer victims for medical, social,*

*psychological and legal services, and provide feedback to the victim continuously” (participant no:14). “To gather enough evidence, to arrest the perpetrator and brought him to court” (participant no:15).* All 13 participants understood the question by responding positively about the role of an investigator in GBV cases however, only participant 1 & 8 skipped the question. The researcher thinks that the role of an investigator in GBV cases is to ensure that during the process of interviewing the victim, the investigator needs to provide a victim accommodation and must make sure that they avoid the second victimization. In a case where there is a death involved, the investigators must ensure that they identify evidence at the scene, collect, and further trace the witnesses and suspects.

Literature, as discussed by (Bell, 2019:2), highlights that forensic investigators must be skilful enough to be able to investigate various crimes, including searches as depicted in (table 2 - Section 3.2.1). As can be seen in that table, there are various specialities of forensic investigation performed by individuals who are trained within the field of forensic science. In addition, it is important to note that, in reality, the role of forensic investigators is not quite so simple to perform but requires special skills (Gardner & Krouskup, 2019:31; Zinn & Dintwe , 2015:06).

From participants’ responses, it is evident that investigators must continue to obtain training in their various environments or special fields. This results in successful prosecutions of cases they investigate. The interpretation of the next theme follows below.

### **6.3.6 Theme 6: Exploring Participants’ Perceptions of the Value of Chain of Evidence**

In this section, the researcher sought to explore participants’ understanding of the significance attributed to the preservation and continuity of possession, also known as chain of possession. The chain of possession serves as a cornerstone in the foundation of truth-seeking efforts by investigators. For this reason, it is important for investigators to always remember that evidence collected at crime scenes must be preserved and proper recording of their movement kept avoiding doubts from coming out during court



proceedings. During focus-group interviews, the question (Question 6: What is the value chain of evidence?) was posed and participants responded as follows: *“Chain of evidence plays an important role as it ensures that the people involved in the case don’t lose track on the evidence as it ensures that through every step the evidence is recorded and there’s all information on who obtained it and where it currently stored, who is responsible for keeping it”* (participant no: 02). *“Chain of evidence is a process of keeping a record of already recognised evidence, it is important to keep a record to avoid the loss of evidence during the process of investigation because without evidence they are no case (participant no: 03).”* *“Chain of evidence is important as it gives the court all evidence, step by step regarding crime committed by a perpetrator to have a successful prosecution”* (participant no: 04). *“The process of collecting, handling of evidence presented at court. It is valued more that is why you do not have to temper with it”* (participant no: 05). *“Chain of evidence is what makes the evidence worthy of submission before court”* (participant no: 06). *“Is physical evidence that generated as part of a crime and recovered at the scene of crime”* (participant no: 07). *“Handling of exhibit from one person to another”* (participant no: 10). *“Proves the integrity of a piece of evidence a proper trail is maintained so that the persons who had charge of the evidence at any given time can be known quickly and summoned to testify”* (participant no:11). *“It is very important it strengthens the case”* (participant no:12). *“Handle and processing of proof or exhibit found in a crime scene or person”* (participant no: 13). *“Show that evidence was handled properly and was not contaminated or tempered with”* (participant no: 14). *“To have a concrete case, when presenting it at court”* (participant no: 15). The researcher recorded a number of 12 participants who clearly understood the question and responded positively. Participants 01, 08 & 09 skipped the question. According to the researcher, a chain of evidence is a procedure which falls under the rules of evidence of ensuring that all the evidence obtained is on the record. Sisodia (2022:614) added that the chain of custody process follows the preservation of the crime scene. As soon as a public security institution becomes aware that a criminal offence has occurred, the police authority must go to the location and ensure that the scene is properly preserved until the arrival of the official criminal experts. Literature, as discussed by (Girard (2021:3), highlights that physical evidence collected by the police or crime scene technicians, which includes any

relevant materials or objects associated with a crime scene, victim, suspect, or witness must be properly recorded/documentated. In addition, Moorthy & Sukuman (2015:13) elaborated that one of the valuable physical pieces of evidence that a suspect leaves unintentionally at the crime scene is likely to include footprints. This means that footprints or casts of footprints must also be preserved.

From the responses of participants to the question, it is evident that there was a general understanding of the significance of the chain of possession of evidence. Presentation of the following theme is presented next.

### **6.3.7 Theme 7: Exploring Participants' Understanding of Gender-based Violence**

In this section, the researcher sought to explore the nuanced perspectives of participants' regarding the pervasive and deeply impactful issue of gender-based violence. Moreover, I sought to understand participants' comprehension of the complexities, causes and consequences of gender-based violence. It was important to solicit information about various myths associated with gender-based violence. During focus group interviews, the question (Question 7: What is gender-based violence?) was posed and the participant had the following to say: "*Gender-based violence is violence that is directed against a person because of their gender*" (participant no 02, 05, 09, 10, 11, 14 & 15). "*Crime committed amongst man, woman and children in a domestic relationship*" (participants no 01, 04, 06, 07, & 12). "*Crime committed between people of different genders, it can be any crime involving finance, physical and emotional abuse*" (participant no: 03). "*Crime that is motivated by any gender in a form of abuse or harmful acts directed at an individual based on their gender*" (participant no: 08).

All participants had a clear understanding of the question on gender-based violence, this view is based on the feedback during the interviews. The participants' responses are very similar. De Villiers Graaf (2017:21) in Chapter 5.2 paragraph 01 supported the participants by asserting that GBV is based on a person's gender, it can be targeted at those who do not conform to gender stereotypes, as in the case of gay-bashing or 'corrective rape', where it is intended as a form of punishment for transgressing societal norms. Based on participants' responses, it is evident that gender-based violence is a concern to the general public and all should contribute to finding the solution to the

problem. While the police appear to be doing something about the problem, it is evident that society must assist the police as this type of crime takes place in areas where the police can only react after the crime has been committed. The community has a responsibility to report even before the crime has been committed. In most cases, family members of victims are aware of the problem but for some reason, fail to report it to authorities. Presentation of the following theme is presented next.

### **6.3.8 Theme 8: Exploring Participants' Understanding about the value of forensic identification techniques to investigate GBV**

In this section, I sought to explore the diverse perspectives of participants, seeking to unravel their understanding of the role of forensic identification in criminal investigation. During focus group interviews, participants shed light on the significance and challenges of forensic identification in the pursuit of truth and justice. When asked the question (Question 8: What is the value of using forensic identification techniques to investigate GBV?), participants responded as follows: *"They help proof that the perpetrator of a crime that is apprehended is indeed the correct person to avoid wrongful prosecutions"* (participant no: 02). *"Play a very important role as it have specialized identification techniques like DNA and fingerprint identification that help in identifying a perpetrator"* (participant no: 03). *"It plays a vital role in identifying and linking the perpetrator with the offence he /she committed"* (participant no: 04). *"Collection of fingerprints, collection of semen and instruments"* (participant no: 05). *"It plays an important role in gathering physical evidence and biological evidence like hair & bullets"* (participant no: 06). *"Examine evidence if found at crime scene"* (participant no: 07). *"It assists in identifying suspects, prove that indeed the crime of GBV was committed"* (participant no: 08). *"Helps in gathering forensic evidence"* (participant no: 09). *"Collecting of evidence"* (participant no: 10). *"It helps in collection of evidence semen and bloodstains"* (participant no: 11). *"In linking the suspect"* (participant no: 12). *"Helps with proof of evidence collected from contact during the incidents"* (participant no: 13). *"To identify specific objects from the trace evidence left at a crime scene"* (participant no: 14). *"Is to assist the investigator to successfully identify a suspect by applying certain forensic techniques"* (participant no: 15). The researcher captured the responses of 14 participants who shared their different views about the question, except for participant number 01 who did not respond. All

participants understood the question that was asked during the interview. This view is further supported by Mallet et al., (2014:396) in Chapter 4 paragraph 2 by highlighting that identification of perpetrators is central to any criminal investigation, though most crimes are easily resolved since the perpetrators are identified red-handed at the scene or swiftly traced, usually by the agency of the public rather than of the police or forensic experts. Presentation of the following theme is presented next.

### **6.3.9 Theme 9: Exploring Participants' Understanding of Photographic Identification during the investigation of GBV**

In this section, I explored the diverse perspectives of participants, of their understanding of the role and significance of photographic identification in the realm of investigations. It is significant to note that photography is crucial and there is an adage that says, "*A picture is worth a thousand words*". However, with the advent of technology, photographs or images may be manipulated. For this reason, investigators need to ensure that photographs presented to the court maintain originality and integrity. During interviews with participants, I sought to obtain their perspectives about photographic identification. Photographic identification is an integral tool in the pursuit of clarity and justice. Participants were asked the question (Question 9: What do you understand about photographic identification during the investigation of GBV?) and they responded as follows: "*To store the evidence gathered*" (participant no: 01). "*Photographic identification is the identification of suspects through photos*" (participant no: 02). "*It is whereby photos of a perpetrator is taken by an expert to assist the court to lead evidence against the perpetrator either on the scene of crime or day of the commission of an offence*" (participant no: 04). "*The use of photographs in investigation is just one of the identification procedures used by police but not used more often*" (participant no: 05). "*Evidence gathered through photographs*" (participant no: 06). "*Is valid photo identity document issued by an official government authority*" (participant no: 07). "*To be able to identify the accused*" (participant no: 08). "*Identification of exhibits containing a suspect by means of photographs*" (participant no: 09). "*Photographing of a crime scene*" (participant no: 10). "*It helps to identify unknown suspects*" (participant no: 11). "*To identify suspects through photo album*" (participant no: 12). "*Identification of faces from photographs visual check*" (participant no: 14). "*Identification of suspects using photos, it is more like*

*identification parade but this one they use only photos” (participant no: 15).* All 14 participants shared their different views about photographic identification, except for participant no. 03 who did not respond. The researcher supports participants (no.04 & 15) by highlighting that photographic identification is the identification of a suspect, it assists the victim or witness to recall the appearance and body characteristics of the perpetrator. It is also known as a photo lineup. Literature as discussed by Erzsebet (2017:31) emphasises that photographic identification is an essential element of criminal investigation. Moreover, Mozayani & Fisher (2018:61) emphasised that the photographic identification process requires skills and knowledge and must also be preserved the same way other evidence is handled. Based on participants’ responses, it is evident that they understand the intricacies around photographic identification. Presentation of the following theme is presented next.

#### **6.3.10 Theme 10: Forms of forensic evidence used as identification techniques to investigate GBV**

In this section, participants shed light on the sources of evidence that stand as silent witnesses to the violation of trust and personal boundaries. Furthermore, I sought participants’ understanding of the sources that contribute to the pursuit of justice in the aftermath of a sexual assault. During focus group interviews, the question (Question 10: What are the forms of forensic evidence used as identification techniques to investigate GBV?) and participants responded as follows: *“Weapon” (participant no: 01). “Witness, wound and bloodstain” (participant no: 02). “Semen, bloodstain, bite-marks especially in cases that involves physical evidence” (participant no: 03). “Swaps, fingerprints, DNA sample (hair, nails & blood) footprints and clothing” (participant no: 04). “Vaginal fluid, blood and sweat instruments used in crime scene” (participant no: 05). “Weapons and biological fluids” (participant no: 06). “Fingerprints, bloodstains, hairs and body fluids” (participant no: 07). “Blood, dead body bruises on a human body” (participant no: 08). “Physical instruments and biological evidence” (participants no: 09 & 10). “A human body or its parts, body trace evidence such as fluids such as blood, semen, and crime” (participant no: 11). “Blood and semen” (participant no: 12). “Injuries visible evidence” (participant no: 13). “Historical source, legal documents, eyewitness, audio and video recordings” participant no: 14). “Objects used as instruments; blood sustains after an*

*assault” (participant no: 15). All participants managed to answer the question, which means that they clearly understood by sharing their different opinions. Gardner & Krouskup (2019:23), as cited in chapter 4 paragraph 5 also noted that blood, spittle, semen, vaginal secretions, bone or tissue are important biological evidence. Thus, a scene of the crime of GBV can be rape, murder, assault or any aggressive violence that causes physical, emotional and mental harm to another human. A CSI can obtain hair, saliva, bite marks, blood, fingerprints, weapons, firearm cartridges semen, and even cell phones which can be used to assess the victim’s interactions with the suspect on social media.*

Literature as discussed by Bowen (2018:25); Woods, (2019:109) and other authors cited in Section 4.5.8 highlights various sources of evidence. The study’s participants’ responses confirm what literature discussed in Chapter 4. Presentation of the following theme is presented next.

### **6.3.11 Theme 11: Exploring Participants’ Understanding of Bloodstain Pattern Analysis during the process of identifying a suspect in the investigation of GBV**

This section explores trails left by blood at crime scenes. In forensic investigation, blood pattern analysis plays a crucial role in identifying perpetrators. Bloodstain pattern analysis assists in individualisation, resulting in the distinction between the victim and perpetrators. Not everything that looks like blood is actual blood. Moreover, attempts to remove blood splatter may be made, requiring special equipment like luminol to make it visible. Participants’ perspectives on bloodstain pattern analysis were crucial in the pursuit of truth in forensic investigation. During focus group interviews, the question (Question 11: What do you understand about bloodstain pattern analysis during the process of identifying a suspect in the investigation of GBV?) and participants responded as follows: *“To be referred to the forensic laboratory (participant no: 01)”. “Blood tells a lot about the colouring of the blood; the strength determines when the crime was committed and how it was committed (participant no: 2)”. “BPA is the examination of blood that is available in the crime scene (participant no: 03). “BPA examines the size, shape, and spreading patterns of the blood found at a crime scene (participants no: 4 & 14). “Refer to blood spatter either in the wall clothing of victim, suspect or in the room where the crime was*

*collected (participant no:05)". "It all depends on the shape of the blood pattern to determine how severe the crime (participant no: 06 & 8)". "Interpretation of bloodstains at a crime scene to recreate the actions (participant no: 07 & 10)". "It helps to identify the nature of the weapon used by a suspect and aggression of the crime (participant no: 09)". A grouping of distribution of bloodstains that indicates "through the regular or repetitive form (participant no: 11)". "Is used to link or eliminate (participant no: 12 & 13). "Collection (method of collection of blood at the crime scene (participant no: 15)".*

All participants understood the question by sharing their different opinions about bloodstain pattern analysis. Researchers such as Lee, Seo, Moon, Kim, Goh, Park, & Shin (2020:1) in Chapter 4 paragraph 5.5 agrees with (participant number 4 & 14) by indicating that bloodstain pattern analysis is an area of forensic science that examines the physical features of a bloodstain that include the size, shape and distribution to rebuild a crime scene. Presentation of the following theme is presented next.

### **6.3.12 Theme 12: Exploring Participants' Understanding of Fingerprint Identification during the process of investigation**

In this section, I explored the participants' understanding of fingerprints and fingerprint identification. It is important to note that fingerprints and fingerprint identification important in the pursuit of justice. To find participants' insights and perspectives, a question (Question 12: What do you understand about fingerprint identification during the process of investigation?) was asked and participants responded as follows: *"To identify accused fingerprint with one found on the scene (participant no: 01)." "Exchange of evidence, usually the perpetrator leaves fingerprints in the crime scene (participant no:2)". "Fingerprint identification is any handprints that are found in the crime scene, they are documented and sent straight to FL for further determination (participant no:03)". "Fingerprint identification is the method of identification using impressions made by ridge formation or patterns found on the fingertips (participant no:04)." "Fingerprint are lifted either from the scene of crime and from the suspect and expert use their skills to compare fingerprints for individualisations of suspects (participant no:05)". "It is used to identify suspects and victims in an alleged offence (participant no:06, 08, 09 & 13)". "Is a process of comparing two instances of friction ridge skin impressions from human fingers or toes*

(participant no: 07)”. “Through fingerprint pattern (participant no: 10 & 12)”. “Fingerprint identification is used when a fingerprint is found at the crime scene it will be collected and be compared on the database (participant no:11).” “It is a pattern recognition where fingerprints are compared with stored data. It helps investigators link one crime scene to another involving the same person participant no: 14)”. “It is used to find out if a person is wanted or a convicted person (participant no:15)”. By reviewing the participants’ responses about fingerprint identification, all of them had a similar understanding about the question. Saini & Kapoor (2016:3), as cited in chapter 04, paragraph 6, agree with (participant no:14) by stating that fingerprints have been used for identification in criminal investigations for a long time. Fingerprint analysis is an important tool for crime detection because it is robust and exceptional.

Moreover, the literature, as discussed by (Swanson, Chamelin, Territo & Taylor, 2019:108; Mirakovits & Gina, 2016:43) - in Section 4.6 confirms participants perspectives. The responses of the participants show that they understand the significance of fingerprints in forensic investigation. Presentation of the following theme is presented next.

### **6.3.13 Theme 13: Exploring Participants’ Understanding of Deoxyribonucleic Acid as a method of forensic identification**

In this section, I explore participants’ understanding of DNA. Moreover, I sought to obtain diverse perspectives of their fundamental understanding of the building blocks that shape individual identities. The participants shared their insights, and when asked about DNA (Question 13: What do you understand about DNA as a method of forensic identification?), they responded as follows: “Evidence taken from accused to be used at the court of law (participant no:01)”. Everyone “is unique even identical twins have their uniqueness (participant no 02 & 15)”. “DNA determines the uniqueness of people in most cases it is used to prove that the perpetrator was indeed available in the crime scene by analysing and interpreting that biological evidence of a suspect that was collected in the crime scene “Participant no:03)”. “When a sample of human tissue is collected as part of the evidence found at the crime scene. It can be from a person and also from the crime scene (participant no:04)”. “Are samples taken in the scene of a crime to identify crime



*perpetrators (participant no:05)". "Identifying a suspect using biological (participant no:06)". "It is made of two linked strands that wind around each other to resemble a twisted ladder (participant no: 07, 12 & 13)". "It helps to prove if the alleged suspect is the one who committed a crime (participant no: 08)". "Forensic biology identified evidence Participant no: 09)". "DNA is the comparison of blood or any other evidence from the victim and suspects participant no: 10)". "A self-replicating material that is present in nearly all living organisms as the main constituent of chromosomes (participant no: 11 & 14)".*

All participants shared their different perspectives about the question, meaning that the question was clear and understandable. The researcher asserts that DNA testing is a crucial process in the investigation because it assists law enforcement specialists. The use of DNA-generated results assists in identifying that indeed a suspect was available at the crime scene. This viewpoint is supported by Zulfiqar et al., (2021:2) in chapter 4 paragraph 7 when they argue that although its analysis requires more time and resources DNA can accurately identify a suspect. Ribeiro et al., (2019:03) state that DNA is considered a gold standard forensic technique because it allows little room for error. This is in agreement with the participant's responses. Presentation of the following theme is presented next.

#### **6.3.14 Theme 14: Exploring Participants' Understanding of Eyewitness Identification during the investigation of GBV.**

In this section, I explored the diverse perspectives of participants' understanding of the value of eyewitnesses in an investigation and when asked the question (Question 14: as a detective dealing with an investigation of GBV what do you understand about eyewitness identification?), they responded as follows: *"A person who saw the crime happening and will be able to provide evidence (participant no:02)". "Person who saw the incident or was present during the incident (participant no03, 13 & 08)". "Whereby information is collected from the victim regarding all people who were present during the commission of the offence (participant no:04)". "Eyewitness identification in criminal law is evidence received from a witness who saw an event (participant no:05)." "In criminal law evidence is received from a witness who has seen an event and can testify in court*

*(Participant no:11).” “Person who saw what happened (participant no:12)”. “Evidence is received from a witness who has actually seen an event and can testify in court, direct evidence participant no:14)”. “Any person who gathered evidence and will be able to give evidence in court (participant no:15)”. The researcher recorded only 10 participants who understood the question and shared their different views about eyewitness identification. Five participants did not answer the question due to lack of knowledge on the question. The researcher agrees with participants that eyewitness identification implies a person who would have witnessed an incident without being influenced by any intoxication drug, or vision impairment and that person must be able to testify in court.*

Literature as discussed by Swanson et al., (2019:706) shows that eyewitness identification is the proof of identity of objects involved in a crime by a witness who perceives the object through one or more senses. Moreover, Rubinova et al., (2020:167) highlighted that crimes are commonly witnessed as live events and the witness recognition memory performance is useful if the testing conditions are similar to how the memory was formed. This is also in line with the participants’ responses.

Presentation of the following theme is presented next.

#### **6.3.15 Theme 15: Exploring Participants’ Understanding of Line-up identification during investigation of GBV.**

In this section, I explore the diverse perspectives of participants’ understanding of line-up identification in the pursuit of justice. During focus group interviews, a question was asked (Question 15. What do you understand about line up identification during investigation of GBV?), and participants responded as follows: *“It is held to help the witness identify the suspect. Usually, it will contain a suspect and 8 other people who have the same characteristics (participant no: 02)”. “Lineup is when the suspect is apprehended with maybe 04 other suspects to help the victim identify the correct perpetrator in a line up no unauthorized people are allowed and usually the people available in a line up share the same characteristics (participant no:03)”. “Is mainly held whereby suspects are standing in a line and victim or witness point out the suspect (participant no:04)”. “It is part of the process where a victim is about to point out the suspect. It is important for the victim not to point out a person standing alone but group of people to be sure of person who did*

*them wrong (participant no:05)". "Where a suspect is identified by means of physically pointing out (participant no:06)". "Is a direct testimonial evidence in a form of identification parade (participant no:07)". "It is a method used in identification parade (participant no:08)". "Lineup consists of people with same or similar body structure, complexion, weight and including race (participant no:09)". "Lineup is used to identify and point out the accused person from the people who are on the lineup (participant no:11)". "People who participate in an identification parade (participant no:12). "Identification parade (participant no: 13)". "A group of people or a series of things gathered together to be part of a particular event. Arrange a number of people or things in a straight line (participant no: 14)". "A group of people who will be able to testify in court (participant no: 15). All participants managed to respond to the question about line-up identification, they shared their similar views that indicates that they had full knowledge about line-up and how it was done. The participants' views are supported by Ewulum (2019:133) in Chapter 04 paragraph 8.1 by indicating that a line-up is an identification procedure where a suspect can be recognised as the one who committed the crime. Presentation of the following theme is presented next.*

#### **6.3.16 Theme 16: Exploring Participants' Understanding of Show ups during the process of Investigation**

Lastly, in this section, the perspectives of participants about their understanding of show-ups were explored. To this end, Question 16 (What do you understand about showups during the process of investigation?) was asked, and participants responded as follows: *"Availing yourself as a suspect in court (participant:02)". "It is all about complying with showing up for court appearance (participant no:03)". "Where a suspect or victim went out voluntarily with the police to go and point out the scene of the crime (participant no:04)". "It is part of the witness being present at a scene. It also increases the level of the evidence needed at court or wrongful convictions (participant no:05). "It has to do with witnesses who come forward to identify the suspect (participant no:06)". "Showups bring the suspects and witnesses or victims of a crime together in face-to-face meeting (participant no:11)". "When the victim avails him or herself for pointing the suspect (participant no:12)". "Pointing out (participant no:13)". "Is when police present a single suspect to an eyewitness for identification (participant no:14)". "A show up is like an*

*identification parade, whereby a group of people lineup with the suspect, and the suspect should then point out by the witness as a person who committed an offence (participant no:15)”.*

Only 10 participants managed to respond by sharing their different opinions about showups while the researcher observed that 05 participants did not respond due to lack of knowledge of show ups. Hess et al., (2017:235) in Chapter 4 paragraph 8.3 agree with Participant Number 14 by emphasizing that show up may occur two hours after a crime is committed. Where a suspect has fled the scene but is later apprehended within minutes, the suspect can either be returned to the scene or the witness may be taken to where the suspect was apprehended within minutes. The police can either return the suspect to the scene or take the witness to where the suspect was apprehended.

#### **6.4 SUMMARY**

The findings that are presented in this chapter are based on data that was collected through interviews. The researcher quoted exact the words of the respondents. Some of the participants did not answer all the questions contained in the interview schedule as research principal participants could choose whether or not to participate in the study. Participants shared their different perspectives supported by different literature; most questions that were not answered indicate that participants lacked knowledge.

## **CHAPTER SEVEN: SUMMARY, CONCLUSION AND RECOMMENDATIONS**

### **7.1 INTRODUCTION**

This chapter presents a summary of findings derived from data that was collected through interviews and represented through themes, the conclusion and recommendations. The process of forensic identification begins with the commission of a crime that involves a victim and suspects to the first responder which is law enforcement officials (SAPS). Detectives of the SAPS must know all the basics of managing and processing a crime scene and such ensures that officials obtain trustworthy evidence. Crime scene evidence should be managed properly to be easily linked to the relevant perpetrator. The research aimed to evaluate the value of using forensic identification techniques to investigate GBV. Furthermore, the purpose was to explore information regarding the use of forensic identification techniques and recommend possible solutions which would enhance the performance of criminal investigation in solving cases of GBV in South Africa.

The research addressed the following questions:

- What is GBV?
- What is the crime scene and its management in the investigation of GBV?
- Who are the role players in the GBV crime scene?
- What is forensic identification and individualisation?
- What are the forms of forensic evidence used as identification techniques to investigate gender-based violence?
- What is the value of using forensic identification techniques to investigate gender-based violence?
- What are the different identification techniques that are used within criminal justice?
- What are the advantages and disadvantages of using and relying on forensic identification techniques?

### **7.2 SUMMARY**

Chapter one presents the rationale of this study, which highlights the problem statement of the research. The aim and purposes of the research are followed by the research

objectives, the research question, research demarcation and limitations, the value of the research, followed by the meaning of the key terms used in the study. The literature review and methodology framework of the study includes post positivist worldview, anti-positivist worldview, interpretivist, constructionist view and pragmatic worldview. The chapter further contained sampling which includes probability sampling, non-probability sampling, purposive sampling and simple random sampling. Furthermore, the population of the study was described, along with how data was gathered, which was through interviews, structured interviews and semi-structured interviews, a questionnaire was explained properly. Moreover, data analysis, data interpretation and trustworthiness are guaranteed in the study through conformability, credibility, dependability, transferability and triangulation. Lastly, the researcher further explained the ethical considerations that include voluntary participation, informed consent, confidentiality and anonymity, securing the data, no harm to participants, and ethical reviews.

Chapter two presents the literature review which addresses the meaning of a scene of crime and the two categories of crime scenes namely primary and secondary. The value of crime scene management, the purposes of a crime scene investigation, securing the crime scene and searching the crime scene are highlighted. Crime scene sketching, crime scene photography and who handles a crime scene are mostly explained as the first responder, crime scene investigators, emergency services and forensic nurse, and forensic photographer.

Chapter three focuses on the meaning of forensic investigation, forensic Investigators, and forensic disciplines, which include forensic auditing, cyber forensics, crime scene forensics, forensic entomology, forensic pathology, forensic psychology and forensic toxicology. Forensic investigation at the SAPS involves the ballistics, biology, question document, scientific analysis and chemistry units. Criminal investigation at SAPS, the goals of criminal investigation and, the variance between identification and individualisation of crime as well as the rights of victims are also explained.

Chapter four represents forensic identification techniques which contains the value of forensic identification, the forensic identification techniques, forensic evidence, and forms of forensic evidence which include physical evidence, biological evidence, body fluids,

blood, bloodstain pattern analysis, semen, bite marks, hair as evidence, and fingerprint identification. The different types of finger marks, DNA identification, eyewitness identification, line-up identification, show-ups, photographic identification and voice identification.

Chapter five represents gender-based violence, which describes how violence is targeted towards people of a certain gender, forms of violence and the difference between GBV and violence against women. The extent of GBV in South Africa, the victims of GBV, gender-based violence prevention, legislation to combat GBV and GBV in neighbouring countries namely Zimbabwe, Botswana, Namibia and Kenya. Types of GBV, which include physical, emotional, sexual and economic violence were described. Also, the violence against women and the impact of GBV in societies were described. Feminism theories, radical feminism, Marxist feminism, socialist feminism, liberal theory. Gender-based violence in a workplace and causes of GBV.

Chapter six represents the presentation, and interpretation of findings which includes a historical background of participants. The presentation is in the form of a diagram showing participants' ranks, a diagram of participants experience, a table that represents the number of study participants, a doughnut gram that represents the professional qualifications, a doughnut gram that represents the training regarding identification techniques followed by the themes that represented data obtained from findings. Theme 1 represents criminal investigation; Theme 2 forensic investigation; Theme 3 evidence; Theme 4 crime scene; Theme 5 the role of an investigator; Theme 6 value chain evince; Theme 7 gender-based violence; Theme 08, the role of forensic identification, theme 09 is on photographic identification; theme 10 sources of evidence; theme 11 bloodstain pattern analysis; theme 12 fingerprint identification; theme 13 DNA; theme 14 eyewitness identification; theme 15 line-up identification; theme 16 show-ups, and the summary.

### **7.3 CONCLUSION**

According to the literature reviewed in this study, forensic identification applies science and technology to identify the perpetrators of crime. This identification process is conducted by professionally trained officials within the criminal justice system. The purpose of identification is to reach a positive conclusion by identifying and prosecuting

the correct suspect. Forensic identification is crucial to all categories of criminal or forensic investigation because it assists investigators in easily tracing evidence and linking it with the perpetrator. Forensic identification is very crucial because it increases the efficiency of the investigation especially when a suspect has already fled the scene. The participants' perspective on forensic identification indicates that they all understand it by providing examples about the topic. Only one participant did not understand due to a lack of knowledge about forensic identification.

Obtaining evidence from the crime scene is very important in criminal investigations. Different techniques can be utilized to identify evidence in cases that involve GBV. Such GBV cases include sexual assault or rape, murder, and assault. Different authors such as Queiroz, Bostock, Santos, Guimaraes & Silva (2016:348) emphasised that identification must be based on sound scientific methods and reliable as well as be implemented within a reasonable timeframe. This implies that with poor, untrustworthy and not implementing the correct procedures, the identification of evidence will be irrelevant because the evidence that will be identified would not be reliable.

There is a lot of forensic evidence that can be obtained at a scene of crime which includes, biological evidence such as a suspect's blood in a victim's body or at a crime scene, the semen in a victim's private part or crime scene. There exists a certain procedure that guides the investigators during the sampling of semen at a crime scene or victim. A semen collection kit must always be present during the collection of semen evidence because semen is very sensitive evidence which requires careful collection and handling. Suboch (2016:12) in paragraph 4.5.6 highlighted that detectives usually request the victims to visit a medical facility for evidence collection in cases of sexual abuse or sexual assault. The facility indicated by the author is a health care centre, the reason being that semen collection especially in a victim's body requires a fully trained forensic nurse who can deal with the victims of sexual assault and collect the semen without further victimizing the victim.

Another type of biological evidence that was discussed is bite marks. Bite marks were described by various authors. They can be found in the bodies of both the target and the perpetrator. When most victims find themselves in a situation of being attacked, they try



to fight back, and such usually leaves marks such as bite marks on the suspect's body. Another scenario is that a victim can also defeat a suspect during the attack and a suspect may respond by biting the victim in an attempt to escape. Those marks can assist investigators in effectively linking the suspect. Moreover, another forensic identification that was discussed in this research was hair as evidence. Hair evidence is a crucial item that is obtained at a crime scene or from the body of victim that is tested to prove that indeed the suspect committed an offence.

There is a variety of forensic identification techniques that are proven to be effective and that can be utilized to identify, test and analyse relevant evidence acquired at a scene of a crime. These techniques include fingerprint identification, which plays a huge role in the prosecution of a suspect, forensic specialists use fingerprint identification powder in the crime scene to identify the prints that are available in a crime scene. Three types of fingermarks can be found in the crime scene which include latent, visible and plastic fingermarks. All participants had a clear understanding of fingerprint identification based on their different views of responses or opinions about fingerprint identification.

DNA identification aids the identification of a suspect when semen that is collected from a crime scene or the victim is analysed properly by forensic specialists to link the perpetrator with the case. Only approved forensic officials who are trained in biology or forensic science are allowed to analyse DNA obtained from a crime scene or a suspect. The specialists in terms of collecting DNA evidence from the suspect are guided by laws namely the Criminal Law (Forensic Procedures) Amendment Act of 2013 (Act number 37 of 2013). The Act provides safeguards to protect the inappropriate use of samples and DNA data resulting from the samples (SAPS, 2014).

The majority participants emphasized the relevance of forensic identification techniques that it is crucial in a way that they help prove that the perpetrator of a crime is indeed the correct person to avoid wrongful arrests. The value of using forensic identification techniques in the investigation of GBV is to ensure that relevant evidence is obtained from the crime scene. This retrieval of important evidence that is admissible in court can result in a successful prosecution of the perpetrator. It is important that detectives who deal with such delicate cases must be proficient with all the investigative tactics, including

forensic identification techniques. This study will contribute positively to SAPS detectives at Tshwane during the investigation of GBV and assist in the reduction of backlog cases of GBV.

The researcher's engagement with the participants throughout the study included interviews and a thorough review of literature on the forensic identification techniques used in GBV investigations. The researcher noticed that inadequate knowledge was supplied on some of the forensic identification techniques, and so suggests that trainings that are offered by SAPS department must contain the following topics:

- The value chain of evidence.
- Bloodstain pattern analysis.
- Photographic identification.
- Eyewitness Identification.
- Showups.

The topics cover the most critical aspects of forensic identification techniques that any investigating officer should be familiar with.

## **7.4 RECOMMENDATIONS**

The aim of this study was to evaluate the value of utilizing forensic identification techniques in GBV cases, to determine the advantages and disadvantages of using and relying on forensic identification techniques, and to offer potential remedies that will improve detectives' performance. Several sources were consulted during the study , which were reinforced participant's perspectives on the use of forensic identification techniques in GBV investigation. The recommendations made in this study are based on the findings described in Chapter 06 and literature.

### **7.4.1 Recommendation on the value of Forensic Identification techniques**

The relevance of forensic identification techniques in GBV cases, particularly rape and murder, must be stressed during morning parades to all SAPS detectives who work on GBV cases. This will primarily help criminalists analyze and assess appropriate and relevant evidence collected at the crime scene.

#### **7.4.2. Recommendation on the advantages and disadvantages of using forensic identification techniques in investigation of GBV cases**

The researcher recommends that detectives be conversant with benefits and drawbacks of forensic identification techniques. The information provided to the detectives will enhance their investigative skills during the investigation of GBV. All the detectives must be well-versed in the advantages and disadvantages of forensic identification techniques. For instance, if fingerprints or bloodstains are not available at the crime scene, what other methods can be utilized to identify the perpetrator? Are those options positive or negative? This will also motivate detectives to pursue new and unconventional ideas during the investigation, resulting in identification of a perpetrator.

#### **7.4.3 Recommendation on different identification techniques**

The researcher recommends that before detectives are assigned to work at FSC component they undergo training on how to deal with GBV cases and how identify victims using various identification techniques.

#### **7.4.4 Recommendation on gender-based violence**

The researcher recommends that additional awareness campaigns educating people about GBV should be launched in our communities, schools, churches and workplaces, potentially even through social media. This initiative must be sponsored by SAPS in collaboration with the Department of education and Social Development.

#### **7.4.4 Recommendation for Further Research**

Based on the findings presented in Chapter 6, including the literature that was included during the study on the evaluation of the use of forensic identification techniques in the investigation of GBV cases, the researcher suggests that further qualitative research is needed in other parts of South Africa because GBV does not only affect Tshwane; the researcher also suggests that further research is needed in other neighboring countries that are affected by GBV. The research on forensic identification techniques will help the Department of South African Police Service achieve its mission, vision, and values, which include creating a safe and secure environment for all the people in South Africa. Future

research will further examine the accuracy and reliability of the use of forensic identification methods on GBV. Identification methods play a crucial role in a way that they help prevent erroneous arrests in cases where the victim is fabricating lies about the accuse.

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#### **CASE LAW:**

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# ANNEXURE B: UNIVERSITY OF SOUTH AFRICA ETHICAL CLEARANCE CERTIFICATE



## UNISA 2022 ETHICS REVIEW COMMITTEE

Date: 2022:02:07

ERC Reference No.: ST78

Name: PM Ngcobo

Dear Phindile Mica Ngcobo

**Decision: Ethics Approval from  
2022:02:07 to 2025:02:07**

**Researcher:** Ms Phindile Mica Ngcobo

**Supervisor:** Dr DQ Mabunda

***The evaluation of forensic identification techniques in the investigation of gender based violence***

**Qualification:** Master's Degree in Criminal Justice

Thank you for the application for research ethics clearance by the Unisa 2022 Ethics Review Committee for the above mentioned research. Ethics approval is granted for 3 years.

*The low risk application was reviewed by the CLAW Ethics Review Committee on 7 February 2022 in compliance with the Unisa Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.*

The proposed research may now commence with the provisions that:

- 1. The researcher will ensure that the research project adheres to the relevant guidelines set out in the Unisa Covid-19 position statement on research ethics attached.**
2. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
3. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the CLAW Committee.
4. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.



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## ANNEXURE C: EDITOR CERTIFICATE



**STMBondvo editing services (Pty) Ltd**  
148 Aramburg (Mpumalanga) Cell: 060 346 7091 email: mhlekazist@gmail.com

### Proof of editing

STMBondvo editing services  
148 Aramburg  
Mpumalanga  
South Africa  
Cell.: 0603467091

Date: November 2023

This is to certify that I have edited the Master of Arts of the following candidate:

**Names and Surname:** P.M Ngcobo

**Title:** The evaluation of forensic identification techniques in the investigation of gender-based violence.

**Dr ST Maseko**  
Director  
STMBondvo editing services

**Confidentiality:** *In editing academic documents, I understand that I have access to confidential data, that information contained in documents is confidential and for that, I agree not to divulge, publish, make known to unauthorized persons or to the public the data in documents.*

## ANNEXURE D: TURN-IT-IN REPORT

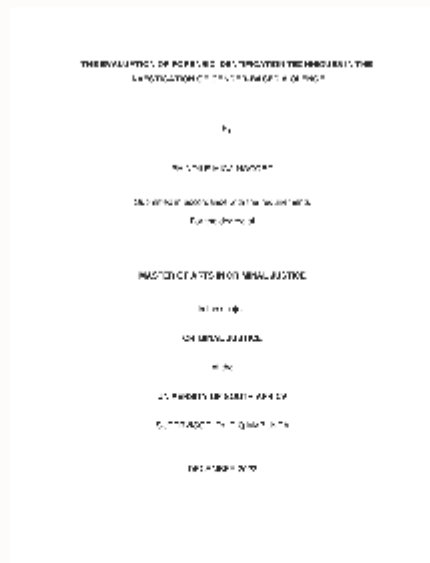


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## ANNEXURE E: DECLARATION FORM

### ACADEMIC HONESTY DECLARATION

Declaration: .....

- I understand what academic dishonesty entails and am aware of Unisa's policies in this regard.
- I declare that this assignment is my own, original work. Where I have used someone else's work, I have indicated this by using the prescribed style of referencing. Every contribution to, and quotation in, this assignment from the work or works of other people has been referenced according to this style.
- I have not allowed, and will not allow, anyone to copy my work with the intention of passing it off as his or her own work.
- I did not make use of another student's work and submit it as my own.

NAME: PHINDILE MICA MOKORO

SIGNATURE: 

STUDENT NUMBER: 4375-654-9

MODULE CODE: AEPES 91

DATE: 2024/01/12