THE POST-MORTEM REPORT AS A SOURCE OF INFORMATION IN THE INVESTIGATION OF MURDER

by

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DECLARATION

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I, Hlengani Phanuel Bila hereby declare that the dissertation submitted for the degree M Tech: Forensic Investigation at the University of South Africa is my original work in both style and execution and that I have acknowledged all sources by means of a list of references.

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ABSTRACT

The research is concerned with how the post-mortem report can be used as a source of information in the investigation of murder cases to identify crime, individual crimes and trace suspects, etc.

The understanding of the post-mortem report, and the information which can be obtained from it, will assist the police investigators to handle murder cases in a professional way.

The purpose of this research was to evaluate the existing manner in which police investigators use post-mortem reports in their investigations, with the intention of determining its strengths and weaknesses, and considering how the usage can be improved. Secondly, the researcher wanted to explore how investigators use post-mortem reports as a source of information in their investigations. To accomplish this, the researcher perused international and national literature in an attempt to explore the field.

The researcher wanted to apply the new research knowledge in order to develop good practice in the field. This has been done by recommending new procedures to enhance performance and to improve the conviction rate in court cases.

KEY WORDS

forensic investigation post-mortem post-mortem report inquest chain of evidence time of death cause of death identification individualisation of crime murder

EDITOR'S DECLARATION

I, Marlette van der Merwe, BA, HDipLib (UCT), ID 480206 0118 085, hereby declare that I have edited the master's dissertation "The post-mortem report as a source of information in the investigation of murder" by Hlengani Phanuel Bila.

Alud Terve

27 October 2009

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CHAPTER ONE GENERAL ORIENTATION

1.1 INTRODUCTION

The researcher worked as an investigator of crime for a period of three years in the South African Police Service (SAPS), and murder investigation was part of his portfolio. He was stationed in Limpopo at Tzaneen SAPS Detective Branch, during which time he observed that investigators of murder cases did not have the knowledge and understanding of the significance of the post-mortem report, which led to gaps in tracing information and suspects.

During monthly inspections the researcher studied several murder case dockets at the Tzaneen SAPS, and he established that some of the investigators did not understand their role in the post-mortem examination. According to Circular 3/1/5/1/148 of 2007 (paragraph 2), many complaints are received from provincial departments of health that broken blades and bullets/projectiles were removed from unidentified murder victims at post-mortem, in the absence of a police investigator. It further states that police investigators fail to arrange for fingerprints and photographs to be taken to determine the identity of the murder victim. These allegations imply that suspects are not convicted of murder as a result of police investigators' carelessness.

Investigators were, in most cases, not perusing post-mortem reports, and that resulted in them not obtaining leads for the investigation. It is unsure whether their reluctance was caused by laziness or a lack of knowledge and understanding.

The above situation, and some other situations discussed in later chapters, indicates how the community has lost trust in those who are charged with the responsibility of investigating murder crimes. The media has reported several times that the police are not doing enough to curb crime.

1.2 AIM OF THE RESEARCH

According to Welman and Kruger (2002:2), the aim of research is to apply various methods and techniques in order to create scientifically-obtained knowledge, by using objective methods and procedures.

The aim of this research is to establish how a post-mortem report can be of value in supplying information for the identification of crime, individualisation of the crime, and the tracing of suspects in the investigation of a murder.

1.3 PURPOSE OF THE RESEARCH

According to Denscombe (2002:26–27), there are six possible purposes for doing research. This study focuses on the following purposes, as described by Denscombe (2002):

- The researcher wanted to evaluate the existing manner in which investigators use post-mortem reports in their investigations, with the intention of determining its strengths and weaknesses and considering how the usage can be improved.
- The researcher wanted to explore how investigators use post-mortem reports as a source of information in their investigations. To accomplish this, the researcher perused international and national literature in an attempt to explore the field.
- The researcher wanted to apply the new research knowledge, in order to develop good practice in the field. This has been done by recommending new procedures to enhance performance and to improve the conviction rate in court cases.

1.4 RESEARCH QUESTIONS UNDER INVESTIGATION

According to Leedy and Ormrod (2005:54), research questions provide guidance for the kinds of data the researcher should collect, and suggest how the researcher should analyse and interpret the data. They go further by mentioning that it is usual for a researcher to ask questions relating to a research problem. This study sought to find answers to the following questions which were set to guide the whole study:

- i) How should a post-mortem report be understood?
- ii) What information could be obtained from the post-mortem report to assist in, inter alia, the identification of crime, the individualisation of crime and tracing the suspects, in the investigation of murder?

1.5 DEFINITION OF KEY CONCEPTS

Leedy and Ormrod (2001:55) reveal that without knowing exactly what a term means, one cannot evaluate the research, or determine whether the researcher has carried

out what was proposed in the problem statement. They go further, and indicate that the definition must interpret the term as it is used in relation to the researcher's project.

1.5.1 Post-mortem examination

Post-mortem is a medical procedure involving a medical examination which is performed after death. Post-mortem involves a series of tasks, nearly all of which are also performed in other areas of medical practice (Selby, 1997:109).

1.5.2 Murder

According to Joubert (2001:104), murder is the unlawful and intentional causing of death to someone.

1.5.3 Crime investigation

Crime investigation can be defined as the lawful tracing of people and instruments which may, directly or indirectly, contribute to the reconstruction of a crime situation and supply information about the persons involved in it (Marais, 1992:1).

1.5.4 Information

According to O'Hara and O'Hara (2003:7), information is knowledge which the investigator gathers from other persons.

1.5.5 Evidence

According to Joubert (2001:321), evidence is the most important means of proving or disproving facts in dispute. It comprises all the information and material submitted to the court by various parties, to enable the presiding officer to judge and settle a dispute.

1.5.6 Muti murder

According to Minnaar (1998:20) *muti* murder is the murder for medicine or the killing of people so that their body parts can be used as ingredients in magic potions (Zulu: *muti,* Venda: mushonga), an act often erroneously labelled "ritual murder".

1.5.7 Post-mortem report

Jackson and Jackson (2004:363) define "post-mortem report" as a document representing the process undertaken by the forensic pathologist in post-mortem examination, and written in a manner that makes its content easily understandable to non-scientists such as lawyers, police and magistrates hearing the case.

1.6 RESEARCH DESIGN AND APPROACH

The researcher employed empirical design. Mouton (2001:133) reveals that empirical design is about factual discoveries or confirmation of the existence of previously hypothesised phenomena. The rationale of using this design is for the researcher to obtain factual information from the participants by having face-to-face interviews with them. The researcher also studied murder case dockets, and reviewed literature dealing with the topic of his choice.

The study is qualitative in approach and evaluative in nature. According to Denzin and Lincoln (2003:13), a qualitative approach implies an approach with an emphasis on the qualities of entities and on processes and meanings that are not experimentally examined or measured (if measured at all) in terms of quantity, amount, intensity or frequency. They go further (2003:57) by stating that a qualitative approach looks at the larger picture, and begins with the understanding of the whole.

The study is evaluative, because the researcher wanted to evaluate the significance of the post-mortem report as a source of information in the identification of crime, individualisation of crime and tracing of suspects. In addition, the researcher wished to evaluate the existing manner in which investigators use post-mortem reports in their investigations, with the intention of determining its strengths and weaknesses and considering how the usage can be improved.

1.7 TARGET POPULATION

Welman and Kruger (2002:119) reveal that the target population is the population to which the researcher would ideally like to generalise his results. The researcher understood that South Africa as a population could not be studied as a whole, so he decided to focus on the Mopani District. The researcher focused on the Mopani District because he was stationed in the district, and also because it was ideal in terms of time and cost, as he was not being sponsored by anyone to conduct the research. The Mopani District is located in the Limpopo. It is one of four districts making up the province. The Mopani District covers 20 police stations, and as such, the researcher

employed simple random sampling to choose three police stations out of the abovementioned twenty.

In simple random sampling, each member of the population has the same chance of being chosen (Leedy & Ormrod, 2001:201). The researcher wrote the names of all 20 police stations on pieces of paper. He then separated each of the names (having 20 name tags in his possession), and put them in a small container, blindfolded himself, shook the container and randomly chose three name tags – Tzaneen, Giyani and Malamulele were drawn from the container.

The participants in this study were 19 police investigators of murder cases, three prosecutors, two forensic medical practitioners and two forensic pathologists. The reason for having these participants was because they were the ones who were directly involved with the post-mortem report and investigation of murder cases.

1.8 SAMPLING

The researcher employed systematic probability sampling. According to Leedy and Ormrod (2005:199), in probability sampling the researcher can specify in advance that each segment of the population will be represented in the sample. They go further to mention that systematic sampling involves selecting individuals (or perhaps clusters) according to a predetermined sequence.

To ensure representation of Tzaneen, Giyani and Malamulele police stations, the researcher selected approximately 23% police investigators from each station. The researcher employed systematic sampling with random start (Welman & Kruger, 2001:60). All police investigators, irrespective of heterogeneous elements such as gender and race, had an equal chance of being selected as participants. The researcher established that there were 34 investigators of murder cases working at Tzaneen police station, while Giyani and Malamulele police stations had 26 and 22 respectively. He then compiled three alphabetical name lists of murder case investigators from each of the abovementioned stations. The researcher wanted to draw a sample of eight investigators from Tzaneen police station, so he divided 34 by 4 and obtained a sampling interval of 4. The numbers 1, 2, 3 and 4 were written once again on a piece of paper, and cut into four pieces in accordance with the four numbers,

and placed in the container. The researcher drew one number to get the starting point on the list, and drew number 2.

With regard to Giyani police station, with 26 investigators, the researcher wanted to draw a sample of six (investigators), so he divided 26 by 6, obtained a sampling interval of 4, and once more wrote the numbers 1, 2, 3 and 4 on the piece of paper. He cut four pieces in accordance with the four numbers, placed them in the container and drew one number to get the starting point on the list, and drew number 1.

The researcher wanted to draw a sample of five investigators from Malamulele police station, which had 22 investigators, so he divided 22 by 4, obtaining a sampling interval of 4. He wrote the numbers 1, 2, 3 and 4 on the piece of paper, cut four pieces in accordance with the four numbers, put them in the container and drew one number to get the starting point on the list, and drew number 2. In this study, the total number of police investigators was 19, and they are also referred to as participants 01–19.

Within the location of Giyani, Tzaneen and Malamule there were only three murder case prosecutors, and as such, the researcher included all of them in the sample. The prosecutors are referred to as participants 20–22. As far as forensic pathologists and forensic medical practitioners were concerned, the researcher managed to secure two of each who were available for the study. The unavailability and scarcity of forensic pathologists could be attributed to what the researcher considers to be a scarce skill field category. The researcher used purposive sampling to select two forensic medical practitioners and two forensic pathologists for this research. He selected them on the basis of his own knowledge of the population, its elements, and the nature of research – in short, based on his own judgment and the purpose of the study (Maxfield & Babbie, 2000:238). The researcher was guided by the knowledge, skills, experience and qualifications of individual participants. All four participants were qualified medical doctors and authorised to perform post-mortems. The researcher considered that they were the most experienced in the conducting of post-mortems, having at least ten years' experience. According to Silverman (2000:104), purposive sampling allows the researcher to choose the case because it illustrates some features or process in which he is interested. These four participants are referred to as participants 23–26 in this study. The total number of participants in this study was 26.

The researcher used one interview schedule to interview police investigators, prosecutors, forensic pathologists and forensic medical practitioners.

1.9 DATA COLLECTION

The researcher employed the triangulation process in data collection. According to Mouton (1996:156), who is also echoed by Powell and Connaway (2004:124), triangulation is the use of a variety of methods and techniques for data collection in a single study. The researcher used multiple data in the form of literature, case analysis and participant interviews, in order to answer the research questions.

According to Leedy and Ormrod (2005:99), multiple sources of data are collected with the hope that they will all converge to answer a specific research question. They again declare that this approach is especially common in qualitative research. For example, a researcher might engage in many informal observations in the field and conduct in-depth interviews, then look for common themes that appear in the data gleaned from both methods. This method, known as triangulation, is also common in mixed method designs, in which both quantitative and qualitative data are collected to answer a single research question.

1.9.1 Literature

Literature study allows the researcher to get a feeling for the topic and the issues involved, and understand how the proposed research would fit into them (Goddard & Melville, 2001:19). The researcher reviewed works by various authors, in order to determine how they understand the report as a source of information (and also how knowledgeable and understanding they are insofar as murder investigation is concerned), to determine their knowledge and understanding of what a post-mortem is, how a post-mortem report should be read, as well as the information which could be obtained from the post-mortem report. The researcher used the research questions as a guide to collect information from literature.

1.9.2 Interviews

Since this is a qualitative study, data was also collected by means of semi-structured interviews. Leedy and Ormrod (2001:184) state that in a semi-structured interview the researcher may follow the standard questions with one or more individually tailored

questions, to obtain clarification or probe a person's reasoning. They go further to indicate that a qualitative study interview tends to be informal and friendly and participants may feel as if they are simply engaging in a friendly chat with the researcher.

The researcher created one interview schedule, emanating from the research questions. The researcher conducted face-to-face interviews with the participants, taking notes during the interviews. He asked all participants, consisting of police investigators, prosecutors, forensic medical practitioners and forensic pathologists, the same set of questions. The researcher also sent the interview schedules to his supervisor and his editor, to check for understandability and clarity. The interview schedule was first handed out to 30 police investigators, six prosecutors and seven forensic medical practitioners who did not form part of the participants for the purpose of testing the questions. The researcher then rectified questions where it appeared that the pilot study did not understand such questions. In the pilot study, the researcher used prosecutors, forensic medical practitioners from outside the area, due to the shortage within the area. Interviews were conducted with each individual in turn, in order to avoid mob psychology.

The researcher followed the suggestions for conducting a productive interview, as proposed by Leedy and Ormrod (2005:147):

1. Identify some questions in advance.

The researcher had a set of questions in the form of an interview schedule. The questions were related to the research problem and were based on the research questions.

2. Make sure the interviews are representative of the group.

The researcher justified his sample by using a simple random sampling technique to choose his participants. In a random sample each person in the universe has an equal probability of being chosen as the participant, and each collection of persons of the same size has an equal probability of becoming the actual participant, as long as they are members of the same universe. The researcher conducted random sampling after an adequate sampling frame was constructed. He selected persons without showing bias for any personal characteristics (Bailey, 1987:87).

3. Find a suitable location.

All participants had quiet offices, conducive to interviewing, and as such, the researcher used their offices.

4. Obtain permission.

The researcher obtained permission from the office of the Limpopo provincial commissioner, and thereafter followed suit with each respective station. He also obtained permission from each respective sample of participants, namely forensic pathologists, forensic medical practitioners and police investigators. He also obtained permission from the Limpopo Department of Health, followed by the respective participants. He also obtained verbal permission from the individual prosecutors, and they all agreed that there would be no need for written permission.

5. Establish and maintain interest.

During the interviews the researcher showed genuine interest in what the participants were revealing, in order to encourage them to "open up".

6. Focus on the actual rather than on the abstract or hypothetical.

The researcher posed questions which were practical, linking and engaging the participants in a real situation. For example: "How can you use the time of death to your advantage during an investigation?" This kind of question helped to determine whether or not the participants understood the importance of time of death on the post-mortem report.

7. Avoiding putting words in people's mouths.

The participants were given the chance to express their understanding, without interruptions. The researcher exercised his listening skills in order to allow the flow of information.

8. Record responses verbatim.

The researcher used shorthand to capture everything the participants were revealing, and whenever he suspected unsureness about anything stated, he asked the participants if it accurately reflected their thoughts. 9. Keep your reactions to yourself.

The researcher did not show any surprise at, or disapproval of, anything mentioned by participants.

10. Remember that you are not necessarily getting the facts.

As experienced, educated, confident and/or convincing as some of his participants were, the researcher always treated their responses as perceptions, rather than as facts.

1.9.3 Case docket analysis

According to Welman and Kruger (2002:182), the term "case studies" means that a limited number of units of analysis, such as an individual, a group or an institution, are studied intensively. Case study does not refer to some or other technique that is applied. They again allude to that uniqueness and idiosyncrasy of a particular case studied in all its complexity. In combination with the literature review and interviews, the researcher conducted case docket analysis of murder dockets from Malamulele SAPS, Giyani SAPS and Tzaneen SAPS.

According to Leedy and Ormrod (2001:201), a sample is chosen by simple random selection, whereby every member of the population has an equal chance of being selected. The researcher decided to work on 45 murder case dockets, 15 from each police station. In his sample he took 100 murder case dockets from each police station, dated from 15 June 2007 backwards. The researcher took the sample of 100 case dockets from Giyani, starting from 15 June 2007, backwards to 13 January 2003. In addition, he took 100 case dockets from Tzaneen, starting from 15 June 2007 backwards to 10 March 2004, and also 100 case dockets from Malamulele, starting from 15 June 2007 backwards to 10 February 2002. Out of each 100 dockets he listed Crime Administration System (CAS) numbers on the paper, then split them per CAS number, putting each hundred CAS numbers in a small container (he had three containers), and employing simple random sampling to select 15 from each container. It appears that Tzaneen police station generated more case dockets followed by Giyani and Malamulele respectively. The researcher noted that the police station

which generated more case dockets within a short period has more police investigators when compared with a station with less police investigators.

The researcher understands that if a post-mortem report is incomplete, it cannot effectively be used to supply information for the identification of crime, individualisation of the crime, and tracing of suspects in the investigation of murder. By conducting case docket analysis, the researcher wanted to establish the level of completeness of a post-mortem report, the researcher wanted to obtain answers to the following questions:

- Did the post-mortem report indicate how the person was killed?
- Did the post-mortem report indicate the weapons which were used?
- Did the post-mortem report indicate the age of the deceased?
- Did the post-mortem report indicate the race of the deceased?
- Did the post-mortem report indicate the sex of the person?
- Did the post-mortem report indicate evidence to link the body with the crime?
- Did the post-mortem report indicate information to identify the crime, individualise the crime or trace the suspect?

1.9.4 Experience

The researcher has been employed by the SAPS since 2000. From 2002 to 2004 he worked in the Detective Branch, Tzaneen, as an investigator, during which time he also investigated murder cases. From 2004 to date (2009), he has been stationed at Limpopo Provincial Training section (Mopani District), and was charged with the responsibility of presenting courses to police investigators. Among other courses, the researcher has presented a course in Investigator and presenter (facilitator) of courses, the researcher gathered knowledge and understanding of murder investigation, which encompasses the issue of the post-mortem report.

1.10 DATA ANALYSIS

Leedy and Ormrod (2005:150) quote Creswell (1998) who describes data analysis spiral steps, which are crucial in analysing data. The researcher has applied these steps in analysing this data.

- The researcher organised data which he obtained in the form of interviews, case docket analysis, experience and literature, and he broke down large bodies of text into smaller units in the form of sentences and individual words. The researcher worked through all the data to decide which one was relevant for this study.
- 2. He perused the entire data set several times to get a sense of what it contained as a whole. In the process he jotted down a few memos that suggested possible interpretation of categories. The researcher also critically evaluated the entire set of data, in order to establish both relevancy and irrelevancy.
- He identified and argued general themes and sub-themes and then classified each piece of data accordingly. This allowed him to get a general sense of patterns – a sense of what the data meant.
- 4. He finally integrated and summarised the data for his readers. This step included offering hypotheses that described relationships among the themes. He broke down specific data into themes, in order to answer the research questions under discussion, in each chapter.

1.11 METHODS TAKEN TO ENSURE VALIDITY

According to Leedy and Ormrod (2005:28), the validity of the measuring instrument is the extent to which the instrument measures what it is supposed to measure.

A researcher thinks about how to demonstrate the validity of his method and analysis in at least two ways (Mason, 1996:147–148):

1.11.1 Validity of data generation methods

This involves asking what it is that the researcher thinks his data source and generation methods could potentially tell him, and how well they can do this. Broadly, he asks how well matched the logic of the method is to the kind of research questions he is asking and the kind of social explanation he intends to develop. In ensuring validity of the sampling, the researcher employed simple random sampling, in order to have all segments of the population represented in the sample. The researcher sought the opinions of prosecutors, forensic pathologists, forensic medical practitioners and police investigators, who were asked the same questions based on the one interview schedule. He reviewed literature limited to the research questions, in order to explore the field, and also drew valid murder case dockets from the aforementioned police stations. The researcher also applied triangulation in data collection, wherein he reviewed literature, interviewed the sample, and also analysed case dockets.

1.11.2 Validity of interpretation

This involves asking how valid data analysis is and the interpretation on which it is based (Mason, 1996:148–149). Validity of interpretation in any form of qualitative research is contingent upon the end product, including a demonstration of how that interpretation was reached. The researcher sought to understand what his data could reveal and also how well it could do so. He broke up the data into manageable themes, patterns, trends and relationships.

The researcher wanted to understand the various constitutive elements of the data through an inspection of the relationships between concepts, constructs, and to see whether there were any patterns or trends that could be identified or isolated, or to establish themes in the data (Mouton, 2001:108).

1.12 METHODS USED TO ENSURE RELIABILITY

Reliability is concerned with the questions of stability and consistency. Do repeated applications of the operational definition under similar conditions yield consistent results (Singleton & Straits, 1999:114)? Will the same methods used by different researchers and/or at different times produce the same results? This is the requirement: that the application of a valid measuring instrument to different groups under different sets of circumstances, should lead to the same observation (Mouton & Marais, 1990:79).

The researcher used reliable sampling techniques in obtaining participants and case dockets, to ensure reliability. He undertook to ensure that the collected data was analysed accordingly, as reflected above.

All the participants were familiar with the concepts of "post-mortem examination" and "post-mortem report" and the value attached to each. The researcher asked all of

them reliable questions, and he avoided ambiguous or vague wording, to ensure that participants would "read" the questions consistently on different occasions (Greenfield, 2002:174). He perused case dockets which were filed in archives, and found that some of the dockets were undetected, whereas some were concluded with "guilty" or "not guilty". The researcher also described the Mopani District as his target population. He again applied the simple random sampling technique, in obtaining the three police stations as samples.

1.13 ETHICAL CONSIDERATIONS

Leedy and Ormrod (2005:101–102) reflect that ethical issues in research need to be adhered to. This study focused on the following categories as outlined by these authors:

- 1. The researcher ensured that research participants were not exposed to physical or psychological harm, and they were not subjected to unusual stress, embarrassment or loss of self-esteem.
- 2. The police investigators, prosecutors, forensic pathologists and forensic medical practitioners in this study were told the nature of the study to be conducted, and given the choice of either participating or not participating. Again, they were told that if they agreed to participate, they had the right to withdraw from the study at any time.
- 3. In reinforcing the right to privacy, the researcher informed all the participants that the information they gave would be kept available for use by interested parties. However, he also mentioned that their names would not be revealed. The researcher referred to all those who participated in this study as participants 1–26. The justification of privacy was, inter alia, to let the participants open up, without any reservations in answering.
- 4. The researcher reported his findings in a complete and honest manner, without distortion of the truth or misrepresentation thereof. He did not fabricate data to support his conclusions, and he acknowledged all sources, to avoid plagiarism and documentary theft.

5. Leedy and Ormrod (2005:102) take it further by saying that in the United States, any college, university, or research institution has an internal review board (IRB) which scrutinises all proposals for conducting human research under the auspices of the institution. This board, which is made up of scholars and researchers across a broad range of disciplines, checks proposed research studies to ensure that the procedures are not unduly harmful to participants, that appropriate procedures are followed to obtain participants' informed consent, and that participants' privacy and anonymity are assured. The researcher submitted his research proposal to the University of South Africa (Unisa), and the proposal was scrutinised by a panel of lecturers before it was presented for approval.

1.14 CHAPTER LAYOUT

The researcher formulated two research questions, and also decided to discuss each research question in its chapter.

- CHAPTER TWO discusses how a post-mortem report should be read for a matter of understanding. The post-mortem report and what it entails, as well as the role of individuals in the post-mortem report, are also discussed.
- CHAPTER THREE discusses in detail the information which can be obtained from a post-mortem report. Police investigators, forensic pathologists, forensic medical practitioners and prosecutors were interviewed, and murder case dockets were analysed, in order to address the research questions.
- CHAPTER FOUR reveals the findings and offers recommendations.

CHAPTER TWO

UNDERSTANDING THE POST-MORTEM REPORT

2.1 INTRODUCTION

According to the *South African Oxford School Dictionary* (2006:494), the word "understand" means to know what something means or how it works or why it exists. Selby (1997:109) reveals that a post-mortem is a medical procedure involving a medical examination which is performed after death. He goes further to indicate that the postmortem involves a series of tasks, nearly all of which are also performed in other areas of medical practice. Bennett and Hess (2004:521) take the discussion further by revealing that reports are permanent, written records of important facts that can be used to examine the past, keep other police officers informed, continue investigations, prepare court cases, provide the court with relevant facts and coordinate law enforcement activities. According to Marais (1992:4), information required by the law in the case of an unnatural death is also of vital importance during the investigation of such unnatural death, and the cause and time of death is usually determined during the post-mortem of the deceased.

The goal of the chapter is to describe aids which are important in understanding this post-mortem report. Concepts such as "forensic investigation", "unnatural death", "inquest" and "post-mortem report" are discussed.

2.2 FORENSIC INVESTIGATION

According to *World Book Dictionary* (1994:836), "forensic" refers to something having to do with or belonging in a court of law. Pollex (2001:10) reflects that forensic investigation is an investigation aimed at instituting criminal, civil or disciplinary proceedings, and where scientific knowledge is applied to a legal problem. It reflects further that if the investigation concerned does not conform to the preceding, then it is not forensic investigation.

In addition to this Selkin (1994:75), explains that forensic investigation relates to the physical evidence surrounding the death. It may include a plethora of relevant details: windows open, doors locked, trajectory of bullets, powder marks, fingerprints, hand-

writing analyses and personal documents, e.g. suicide notes, threatening letters or cashed cheques. James and Nordby (2003:169) agree with Selkin, in revealing that tools used for reconstructing a crime scene will generally locate evidence that can be used to associate suspects with, or dissociate them from, a crime.

The researcher asked the participants the meaning of forensic investigation. They replied as follows:

- One prosecutor indicated that it refers to the investigation aimed at the institution of criminal charges against the perpetrator.
- The two remaining prosecutors revealed that it is an investigation of crime aimed at revealing crime information.
- The two forensic pathologists described it as an investigation with an eye on physical evidence collection.
- Five police investigators indicated that it is gathering of evidence.
- Three police investigators cited that it is the tracing of suspects.
- Three police investigators indicated that it is searching for information about crime.
- Two police investigators indicated that it is a scientific way of investigating crime.
- One police investigator stated that it is the modern way of investigation.
- Two forensic medical practitioners stated that it is investigation focusing on gathering of evidence, and also aimed at prosecuting the offenders.
- Five police investigators also said that forensic investigation is another word for criminal investigation.

The researcher compared the viewpoint of the literature and the participants. He noted that forensic investigation is an investigation aimed at instituting either criminal or civil proceedings, and is also scientific-centred. The researcher noted that only three participants talk about the gathering of information/evidence to institute prosecution and the last five officials equate it to criminal investigation. He also noted that the viewpoint of the rest of the participants is too narrow.

2.3 CRIME INVESTIGATION

According to Bennett and Hess (2004:4), crime investigation is the process of discovering, collecting, preparing, identifying and presenting evidence to determine what happened and who is responsible. Marais (1992:1) reveals that crime investigation is a process of identification of people and physical objects from the time the crime is committed until the guilt of the perpetrator is either proved or disproved in court.

Van der Westhuizen (1996:1) maintains that crime investigation is a systematic search for the truth, with the primary purpose of finding a positive solution to the crime with the help of objective and subjective clues. Bennett and Hess (2004:7) go further by equalling crime investigation with a reconstructive process that uses deductive reasoning based on specific pieces of evidence, to establish proof that a suspect is guilty of an offence. For example, as they explain further, finding the suspect's watch at the scene of a burglary is one piece of evidence that supports the premise that the suspect was at the scene, and the issue that might be contested is whether the watch was planted there.

Axelrod and Antinozzi (2003:13-14) state that a piece of evidence or one clue can immediately reveal the identity of the criminal. They further allege that real investigations are typically much harder work and much less instantly revealing. They state further that many crimes cannot be solved, even by highly skilled investigators. Some crime scenes present insufficient evidence and offer no witnesses. That appears to be a tough reality to accept.

The researcher asked the participants how they understood the meaning of crime investigation. They replied as follows:

- Ten police investigators understood crime investigation as the process of gathering evidence.
- Three police investigators outlined that crime investigation is about tracing and arresting suspects.
- Six police investigators said that crime investigation means the searching for crime information.
- One prosecutor indicated that if the suspect is arrested and charged, prosecution has to be conducted in order to establish the guilt or innocence of the suspect.
- One prosecutor indicated that in crime investigation, when the suspect is arrested, a trial has to be conducted to establish the guilt or innocence of such suspect.
- One prosecutor indicated that crime investigation is the way of gathering evidence which will lead to the prosecution of the suspect in a court of law.

 Two forensic pathologists and two forensic medical practitioners revealed that if a person died unnaturally, for example, the cause of death has to be established, and a murder or inquest docket will be opened in order to investigate whether a person may be held liable for the death, or not.

The researcher noted that the answer given by nineteen police investigators is one dimensional compared to how multi-dimensional the rest of the participants were. He also compared the viewpoint of the literature and the participants and he noticed that only seven participants agree with the literature that crime investigation is the process of evidence gathering in order to prosecute the suspect in criminal court. It is shock-ing that police investigators with at least five year's experience and detective training are not in-depth in their answering of the question.

2.4 THE DIFFERENCE BETWEEN FORENSIC INVESTIGATION AND CRIME INVESTIGATION

The preceding discussion revealed that other than terminological differences, the meaning of forensic investigation and crime investigation are the same. It was indicated that forensic investigation is the investigation aimed at instituting criminal or civil proceedings, and which has to be performed in a scientific manner. Crime investigation is said to be a process using a variety of methods and techniques of gathering evidence, to be used in criminal proceedings.

The researcher asked the participants what the difference is between forensic investigation and crime investigation. They indicated that there is no difference between the two concepts.

The researcher compared the definitions of the literature and the participants on the difference between forensic and crime investigation. He noted that although forensic investigation also includes civil proceedings, it has a similar meaning to criminal investigation.

2.5 OBJECTIVES OF FORENSIC/CRIME INVESTIGATION

Bennett and Hess (2004:5-6), Swanson, Chamelin and Territo (2003:28) and Van der Westhuizen (1996:4-7), limit the objectives of crime investigation to five, which they contend are as follows:

- To determine whether a crime has been committed
- To legally obtain information and evidence to identify the responsible person
- To arrest the suspect
- To recover stolen property
- To present the best possible case to the prosecutor

Van der Westhuizen (1996:4–7) states further, giving the sixth objective of forensic/ crime investigation as the individualisation of crime.

The researcher asked the participants what the objectives of forensic crime investigation are, and they responded in this way:

- Seven police investigators, two forensic medical practitioners and one forensic pathologist indicated that it is to gather evidence.
- Five police investigators cited that it is to arrest the suspect.
- Three police investigators indicated that it is to establish who the suspect is.
- Two police investigators indicated that it is to recover stolen property.
- Two police investigators indicated that it is to take the suspect to court.
- Two prosecutors indicated that the main objective of crime investigation is to prepare a solid case for prosecution purposes.
- One prosecutor and one forensic pathologist indicated that it is to gather evidence about committed crime.
- One forensic pathologist also cited that the main objective, insofar as his scope of operation was concerned, is to determine whether crime was committed, by establishing the cause, manner or time of death.

As can be seen from the responses, some of the participants gave more than one answer, which explains the reason why there appear to be more than 26 participants. The researcher establishes that no single participant gave more than two of the six objectives given in the literature. This would mean that the understanding of the participants is narrow in this regard.

2.6 INVESTIGATION OF UNNATURAL DEATH

In terms of Regulation 1(Definitions) of The Regulations Regarding the Rendering of Forensic Pathology Service of the National Health Act 61 of 2003, for the purposes of the medico-legal investigation of death, the following shall be deemed to be death due to unnatural causes:

- Any death due to physical or chemical influence, direct or indirect, or related complications
- Any death, including those deaths which would normally be considered to be a death due to natural causes, which, in the opinion of a medical practitioner, has been the result of an act of commission or omission which may be criminal in nature
- Where the death is sudden and unexpected, unexplained, or where the cause of death is not apparent

According to the Inquest Act 58 of 1959, every police official must:

- Investigate a death or alleged death presumed to be due to unnatural causes, and
- Submit the report, relevant statements, documents and information thereof to the public prosecutor, if the death or alleged death is due to unnatural causes.
- If a death is presumed to be due to unnatural causes, a post-mortem should be conducted to establish the cause of death, and documents regarding the treatment prior to death should be arranged.
- An inquest docket should be registered.
- Report or cause to be reported the death or alleged death to the magistrate of the district concerned, or to a person designated by that magistrate.

The Inquest Act 58 of 1959 goes further to unfold that "every unnatural death must be investigated to determine the real facts". It also indicates that "unnatural death calls for a post-mortem examination so that the reason of death can be determined".

The researcher asked the participants what the investigation of unnatural death is. They responded as follows: All 26 participants indicated that unnatural death investigation is the investigation aimed at the establishment of the cause of death.

The research compared the view point of the literature and participants and he noted that they do not differ.

2.7 THE NEED FOR CONDUCTING AN INQUEST

According to Steyn (1992:2), an inquest is conducted to promote public confidence and satisfaction and to reassure the public that all deaths from unnatural causes will receive proper attention and investigation as a way of preventing similar deaths, and also to ensure that persons responsible for such deaths may, as far as possible, be brought to justice. Freckelton and Ranson (2006:545) indicate that an inquest is an investigative process, concerned, among other things, to set the public mind at rest where there are unanswered questions about a reportable death.

Steyn (1992:2) continues by indicating that for the administration of justice to be complete and instil confidence, it is necessary that any death as a result of unnatural causes must be officially investigated. *World Book Dictionary* (1994:1090) reveals that an inquest is held to determine whether death is the result of a crime.

Section 2 of the Inquest Act 58 of 1959 provides that:

"(1) Any person who has reason to believe that any other person has died and that death was due to other than natural causes, shall as soon as possible report accordingly to a policeman, unless he has reason to believe that a report has been or will be made by any other person".

Section 3 of the Inquest Act also provides that:

"(1) Subject to the provisions of any law providing for an investigation of the circumstances of any death, any policeman who has reason to believe that any person has died and such person has died from other than natural causes, shall investigate or cause to be investigated the circumstances of the death or alleged death.

(2) If the body of such person is available, any magistrate to whom the death is reported shall, if he deems it expedient in the interests of justice, cause it to be examined by the district surgeon or any other medical practitioner who may, if he deems it necessary for the purpose of ascertaining with greater certainty the cause of death, make or cause to be made an examination of any internal organ or any part or any of the contents of the body, or of any other substance or thing."

The researcher asked the participants about the necessity of conducting an inquest. They answered as follows:

- Seventeen police investigators, two prosecutors, two forensic pathologists and two forensic medical practitioners indicated that the necessity of conducting an inquest is to establish the cause of death.
- One police investigator indicated that it is necessary to conduct an inquest to establish whether death is the result of crime, or a natural occurrence.
- One police investigator outlined that an inquest is conducted if the death is suspected to be unnatural, with the aim of establishing if an individual can be held accountable for the death.
- One prosecutor stated that the Inquest Act 58 of 1959 gives the magistrate the authority to decide whether an inquest should be conducted or not.

The researcher compared the definitions of the literature and the participants, and he noted that they generally do not differ. The researcher, based on the compared viewpoints, concluded that an inquest is conducted to establish the manner of death (see 3.11) and also whether someone can be held liable for such death.

2.8 POST-MORTEM

According to the South African Oxford School Dictionary (2006:347), a post-mortem is an examination of a dead body to discover the cause of death. Van der Westhuizen (1996:113) lists types of deaths which require that a post-mortem be conducted:

- Death caused by the application of force or the effect of any other physical factor or chemical substance, direct or indirect, with or without complications;
- Any death, including a death normally considered to be a death due to natural causes, which, in the medical practitioner's considered opinion, was caused by an act or omission on the part of a person or persons;
- Any sudden, unexpected death which, in the medical practitioner's considered opinion, is not solely and exclusively due to natural causes;
- Any death which falls under Section 56 of the Medical, Dental and Supplementary Health Services Act 56 of 1974, vol. 3 (i.e. the death of a person while under the influence of a general anaesthetic), shall not be deemed to be death of natural causes as outlined in the Inquests Act 58 of 1959 or the Births, Marriages and Deaths Registration Act 81 of 1963.

According to Jackson and Jackson (2004:336), a post-mortem is carried out when the cause of death is unknown or suspicious, at the request of the appropriate legal authority. They go further to cite that in England and Wales, useful information has been obtained from the post-mortem of the bodies exhumed from graveyards several months after burial.

Selkin (1994:91) cites a case wherein a nine-month-old boy died unexpectedly at home, and sudden infant death syndrome (SIDS) was suspected on the death certificate. Several months later, the three-year-old sister also died at home. A genetic disorder was suspected and a clinical post-mortem performed. The pupils were very narrow and the stomach content was musty-smelling and bluish. The main conversion product of parathion, Para Oxon, showed a level of 70 wg/1 in the blood, and cholinesterase was determined to be 0,29 u/l (normal = 4-8 u/i). After exhumation of the boy eight months post-mortem, 5,4 ug/kg Para Oxon was determined in material from the abdominal cavity. The mother then confessed that she had given both her children a dash of parathion dissolved in fluid. The toxicology results indicated, however, that she had administered larger amounts of the poison. She received a life sentence for murder.

The researcher asked the participants what a "post-mortem" is. They answered as follows: All 26 participants maintained that post-mortem is the examining of the dead body to establish the cause of death.

The researcher established that post-mortem is the examination of the dead body to establish the cause of death. He also compared the viewpoint of the participants and the literature and he noted no difference.

2.9 POST-MORTEM REPORT

Fisher (2004:380) explains that the post-mortem report should give guidance in whether the cause of death has been, for instance, stabbing, shooting, strangulation, or other means. In going further, he cautions investigators that determining the above falls within the province of the forensic pathologist, no matter how experienced and/or educated the investigator might be. The Learner's Guide for Inquest investigation (South African Police Services, 2004:16) states that the post-mortem report must have the following content:

- SAPS 91 (a). Fingerprints
- SAPS 180. Details of the incident, together with the death certificate on the reverse
- SAPS 375. Concerning samples taken, sealed and sent
- SAPS 376. Transportation of the body by ambulance
- SAPS 377. Identification of the body
- SAPS 378. Statement of the doctor or pathologist who undertook the post-mortem examination and who has sworn to or confirmed the findings on the report of the post-mortem examination GW 7/15
- SAPS 379. Transport of the body from the medical centre to the mortuary
- SAPS 380. Receiving, handling and keeping at the mortuary
- SAPS 384. Sending of samples
- SAPS 387 (a) and (b) are used in toxicological examinations
- GW 7/15. Report of the post-mortem examination

In terms of Section 212 of the Criminal Procedure Act 51 of 1977, post-mortem reports or findings may be handed to the court in an affidavit, meaning that the medical examiner who conducted the post-mortem examination does not necessarily have to testify in person. Kempen (2008:43) takes the argument further by indicating that it is important that the post-mortem report be completed by a medical examiner from the notes he made as soon as was reasonably possible after conducting the postmortem examination. The post-mortem form (attached hereunder) must include the following contents:

- Name of the forensic medical practitioner or forensic pathologist who examined the body
- Place where the body was examined
- Date of examination
- Race and gender of the deceased person
- Age of the deceased person
- Approximate time of death
- Cause of death
- Description of the deceased person
- All injuries sustained by the deceased person
- Qualifications of the forensic medical practitioner or forensic pathologist

REPUBLIC OF SOUTH AFRICA DEPARTMENT OF HEALTH AND SOCIAL DEVELOPMENT LIMPOPO PROVINCE

REPORT ON A MEDICO LEGAL POST-MORTEM EXAMINATION

To the magistrate of	
I,	do hereby certify –
that at on the day of	f (year)
commencing at:	
I examined the body of (race/gender)	
that this body was identified to me –	
(a) by	as being that of
	., whose reputed age was years
that the chief POST-MORTEM findings made	by me on this body were
that, as a result of my observations a schedule	
that, as a result of my observations a schedule (a) that death occurred on	e of which follows, I concluded –
	e of which follows, I concluded – as I am informed prior to my examination and
(a) that death occurred on	e of which follows, I concluded – as I am informed prior to my examination and
(a) that death occurred on	e of which follows, I concluded – as I am informed prior to my examination and
(a) that death occurred on	e of which follows, I concluded – as I am informed prior to my examination and
(a) that death occurred on	e of which follows, I concluded – as I am informed prior to my examination and
(a) that death occurred on	e of which follows, I concluded – as I am informed prior to my examination and
 (a) that death occurred on	e of which follows, I concluded – as I am informed prior to my examination and
 (a) that death occurred on	e of which follows, I concluded – as I am informed prior to my examination and

SCHEDULE OF OBSERVATION

GENERAL

1.	Height:	Mass:
	Physique:	Nutrition:
2.		
3.	Secondary POST-MORTEM changes:	
4.		of limbs:

HEAD AND NECK

5.	Skull:
6.	Intracranial contents:
7.	Orbital, nasal and aural cavities:
8.	Mouth, tongue and pharynx:
9.	Neck structures:

CHEST

10.	Thoracic cage and diaphragm:
11.	Mediastinum and oesophagus:
12.	Trachea and bronchi:
14.	Pleurae and lungs:
14.	Heart and pericardium:
15.	Large blood vessels:

ABDOMEN

16.	Peritoneal cavity:
17.	Stomach and contents:
18.	Intestines and mesentery:
19.	Liver, gall-bladder and biliary passages:
20.	Pancreas:
21.	Spleen:
22.	Adrenals:
23.	Kidneys:
24.	Urinary bladder and urethra:
25.	Pelvic walls:
26.	Genital organs:

SPINE

27.	Spinal column:
28.	Spinal cord:

ADDITIONAL OBSERVATIONS

.....

SPECIMENS RETAINED:

Nature of specimens	Nature of investigation required	

Mortuary:

B1 1663 Reference Number:

AFFIDAVIT IN TERMS OF SECTION 212(4), ACT 51 OF 1977

Ι,			
(Full Christian names and surname)			
(Qualifications)			
(Qualifications)			
(Official address)			
*State			
I am in the service of the State as a Forensic Medical Officer at:			
On:, the corpse of a,			
bearing number, was pointed out to me by			
and identified as the body of			
On: I concluded a POST-MORTEM examination on the body			
and recorded my findings on attached form (GW 7/15) which facts I ascertained by means			
of an examination requiring skill in *biological /anatomy/pathology.			

"The contents of this declaration are true to the best of my knowledge and belief. I am aware that should it be submitted as evidence and I know that something appears therein which I know to be false or believe not be true, I could be liable to prosecution."

- 1. I know and understand the contents of this declaration.
- 2. I have no objection to taking the prescribed oath.
- 3. I consider the prescribed oath as binding on my conscience.

Pathologist

I certify that the deponent has acknowledged that he/she knows and understands the contents of this declaration, which was sworn to/affirmed before me and the deponent's signature was placed thereon.

Date:
Commissioner of Oaths:
Place:
Full Christian names (in block letters):
Business address (in block letters):

The researcher asked the participants what a post-mortem report is. They answered as follows:

- Nine police investigators, one prosecutors and one forensic medical practitioner indicated that a post-mortem report is the written document about the post-mortem conducted.
- Seven police investigators and one prosecutor revealed that the post-mortem report entails what the possible cause of death could be.
- Three police investigators cited that the possible time of death has to be covered in the report.
- One prosecutor indicated that the post-mortem report should entail the identity of the deceased (person), the findings of the pathologist, pertaining to the injuries, and the possible cause of death.
- Two forensic pathologists and one forensic medical practitioner indicated that the post-mortem report should cover all factors about the identity of the deceased, including his injuries, if any, as well as the possible cause of death – which will also include the possible time of death.

The researcher compared the viewpoint of the literature and the participants and he noted that only eleven participants know what the post-mortem is. The majority (15) indicated what post-mortem should contain and not what it is. The researcher is of the opinion that, if the majority of the participants know what the post-mortem entails, instead of what it is, a training intervention is required to fill existing knowledge gap.

2.10 THE MANDATED PERSON TO CONDUCT A POST-MORTEM

In terms of Regulation 1 (Definitions) the Regulations Regarding the Rendering of Forensic Pathology Service of the National Health Act 61 of 2003, a mandated or authorised person means a medical practitioner registered as a forensic pathologist or forensic medical officer, in terms of the Health Professions Act 56 of 1974, to perform post-mortem examinations or autopsies on a body, and appointed in terms of Regulation 16 of these regulations.

James and Nordby (2003:16–17) reveal that in the United States many forensic pathologists undergo training in the broader areas of forensic pathology, such as toxicology, serology, tool mark examination, crime scene analysis, forensic anthropology and forensic odontology. According to Jackson and Jackson (2004:324–324), the procedure of conducting a post-mortem and writing up post-mortem reports, falls within the ambit of the forensic pathologist. However, they are quick to point out that in cases where the human remains consist only of the bony skeleton (or parts thereof), the post-mortem examination will benefit by the specialist knowledge of the forensic anthropologist. In other situations, where the soft tissues of the body have been degraded, the expertise of another specialist, the forensic odontologist, may prove invaluable in extracting important information.

In terms of sections 1 and 2 of the Inquest Act, the magistrate may mandate a district surgeon or any medical examiner to conduct a post-mortem.

The researcher asked the participants as to who has the mandate to conduct a postmortem. They answered as follows:

- All the 26 participants indicated that the forensic medical practitioner or forensic pathologist is mandated to conduct a post-mortem.
- One prosecutor further mentioned that when the body of the deceased is decomposed, it becomes difficult, if not impossible, for them to indicate the cause of death, due to a lack of sufficient knowledge and understanding. He again revealed that the qualifications of the expert who conducted the post-mortem report can become a point in contest during the trial in a court of law, where the defence attorney could possibly put the credibility of such a post-mortem report in doubt, due to the qualifications or experience of the expert who completed it.

The researcher noted that the literature and participants did not differ in understanding that the forensic medical practitioner or forensic pathologist is mandated to conduct a post-mortem examination. As can be seen from the responses, one of the participants gave more than one answer, which explains the reason why there appear to be more than 26 participants

2.11 THE REASON FOR COMPILING POST-MORTEM REPORTS

Jackson and Jackson (2004:363) illustrate that a post-mortem report is a very important document, representing the process undertaken by the medical practitioner, and that it has to be written in a manner that makes its contents easily understandable to non-scientists such as lawyers, the police, and magistrates hearing the case. This is necessary, because the report is usually admitted for use in court, unaccompanied by the medical practitioner who compiled it.

Bennett and Hess (2004:521) emphasise that a report is crucial, since it is a permanent, written record of important facts made during or immediately after conducting the post-mortem, that can be used to examine the past, keep the police officers informed, continue investigations, prepare court cases, provide the court with relevant facts, coordinate law enforcement activities, and plan for future law enforcement officer performance.

In unfolding the importance of the post-mortem report compilation, James and Nordby (2003:559) maintain that once a medical practitioner writes a report or says something under oath, they own it forever, whether good, bad or indifferent.

The researcher asked the participants why a post-mortem report should be compiled. They answered as follows:

- Ten police investigators indicated that the post-mortem report compilation is crucial, since the report forms part of the evidence to be used in court.
- Seven police investigators indicated that the post-mortem report is written down for use as evidence in court.
- Two police investigators indicated that the post-mortem report has to be written down and attached to the case docket as part of the evidence of a conducted postmortem.
- Two prosecutors cited that if a post-mortem report is not compiled, it will be difficult for the court to use post-mortem evidence if the need arises.
- One prosecutor also unveiled that since the post-mortem report forms part of evidence, it must be attached in the police docket as a statement given by the forensic medical practitioners, outside the court and in writing (extra-judicial statement) which, if the court may deem it necessary, will be supported by the statement given by the forensic medical practitioners inside the court during the court proceedings (intra-judicial testimony).
- Two forensic pathologists and two forensic medical practitioners revealed that the writing up of a post-mortem report makes it easy for them to refer to what they wrote while their memory was still fresh from the event (post-mortem).

The researcher concluded that the literature and participants agreed that a postmortem report has to be compiled, so that there may be a permanent, written record to be used as evidence in a court of law.

2.12 STANDARD PROCEDURES IN DEALING WITH POST-MORTEMS

Van der Westhuizen (1996:123) indicates that an external and internal examination of the body has to be performed. He goes further to reveal that injuries must be carefully noted and described, and this applies as much to old injuries such as surgical operation scars, scars of old wounds, old burns and old traumatic defects, as it does to recent injuries.

Fisher (2004:417) indicates that before an "autopsy" can be conducted, the body of the deceased must be washed and photographed, but not before the forensic medical practitioner has examined the body fully clothed and then undressed and unwashed. Part of the post-mortem examination is the inspection and photography of the body fully clothed, then undressed and unwashed, and then should washing of the body and wounds take place, i.e. directly prior to the autopsy (evisceration and dissection of the body). The identity photograph of the face of the deceased/victim should also be taken. Again, the entire body, including injuries, should also be photographed. He goes further to reveal that photographs taken can be vital during an investigation. If the victim died as a result of a shooting, x-rays are necessary to identify and locate the bullet fragments, jacket, etc.

After photographing, the dissection of the victim's body can be performed, in order to determine the cause of death (James & Nordby, 2003:19).

James and Nordby (2003:19) also reveal that the preparation of a post-mortem report should be done, in order for the post-mortem process to have a record for use in a court of law. The Inquest Act reflects that the report will also detail the cause of death of the victim, which will assist the prosecutor in knowing whether to prosecute or not to prosecute, based on the cause of death.

The researcher asked the participants what the standard procedures are in dealing with post-mortems. They answered as follows:

- Thirteen police investigators indicated that the police investigator has to give details about the incident to the forensic pathologist or forensic medical practitioners, and also ascertain that the deceased is positively identified by the next of kin.
- Four police investigators indicated that in some instances the deceased's body has to be photographed by Local Record Centre officials.
- One police investigator indicated that the body, with external wounds, has to be photographed, so that the court has a clear view of the deceased's condition.
- One police investigator indicated that the forensic pathology officer or medicolegal assistant has to dissect the body under the direction of the forensic medical practitioner or forensic pathologist.
- Three prosecutors did not know the standard procedures for dealing with postmortems. The reason for lack of knowledge on the part of prosecutors might be that they do not physically attend post-mortems at the mortuary.
- Two forensic pathologists and two forensic medical practitioners indicated that the assistant forensic pathologist prepares the body for the post-mortem, and also cuts the body under the supervision of either qualified forensic medical practitioners or a forensic pathologist. They further indicated that the forensic pathologist or forensic medical practitioners identifies, removes and seals the body parts for examination purposes.

The researcher established that the literature and participants agree that the police investigator has to give a detailed report to the forensic medical practitioners or forensic pathologist.

2.13 THE ROLE OF A POLICE INVESTIGATOR IN POST-MORTEM EXAMINATION

In terms of Section 5 of the Inquest Act, at any examination conducted by a medical practitioner, no person other than:

"any other medical practitioner nominated by any person who satisfies the magistrate within whose area of jurisdiction such examination takes place, that he has a substantial and peculiar interest in the issue of the examination shall be present without the consent of such magistrate or the medical practitioner conducting examination".

When reading Section 3 and 5, it goes further, specifying that a district surgeon or any other medical practitioner may conduct the post-mortem examination and that a policeman (investigator) may be present during such examination.

In terms of Regulation 1 (Definitions) of the Regulations Regarding the Rendering of Forensic Pathology Service of the National Health Act 61 of 2003 of the National Health Act 61 of 2003, "investigating officer" means a member of the SAPS, appointed in terms of the SAPS Act 68 of 1995, and designated as an investigating officer to investigate the cause of death of a particular person, and, where possible, to ensure prosecution.

Section 3 of the Inquest Act provides:

"1. Subject to the provisions of any other law providing for an investigation of the circumstance of any death, any policeman who has reason to believe that any person has died and that such person has died from other than natural causes, shall investigate or cause to be investigated the circumstances of the death.

2. If the body of such person is available, the magistrate to whom the death is reported shall, if he deems it expedient in the interests of justice, cause it to be examined by the district surgeon or any other medical practitioner who may, if he deems it necessary for the purpose of ascertaining with greater certainty the cause of death, make or cause to be made an examination of any internal organ or any part of the contents of the body, or of any other substance or thing."

The researcher asked the participants what the role of the police investigator is in the post-mortem examination. They answered as follows:

- Six police investigators indicated that their role is to give a detailed incident report to the forensic pathologist or forensic medical practitioner, about the death scene.
- Five police investigators indicated that their role is to assist with the identification of the body.
- Eight police investigators, three prosecutors, two forensic pathologists and one forensic medical practitioner indicated that the police investigator must be available to witness the post-mortem examination.

 One forensic medical practitioner indicated that the police investigator has to observe and witness the post-mortem examination, since they may be called on to give evidence in a court of law.

The researcher learned that the literature indicates that the role of the police investtigator is to investigate the cause of death, and also to ensure prosecution as a result. The participants indicated that the police investigator has to give a detailed report of the incident to the forensic pathologist or forensic medical practitioner assist in the identification of the deceased and also be available as a witness to the post-mortem. The researcher believes that both the participants and the literature are correct, because the role of the police investigator in post-mortem examination covers all that have been indicated above.

2.14 THE ROLE OF THE FORENSIC MEDICAL PRACTITIONER IN POST-MORTEM INVESTIGATION

Regulation 4 of the Regulations Regarding the Rendering of Forensic Pathology Service of the National Health Act, 61 of 2003 describes the role of the forensic pathologist in this way:

- Carrying out a scene of death investigation, and where appropriate, in consultation with an investigating officer
- Obtaining information that is relevant to the medico-legal investigation of a death
- Taking responsibility for the collection of a body and removal from the scene
- Taking custody of a body from the scene of death until released for burial or cremation, and the processes attached thereto
- Maintaining evidence relating to a body and any associated items at all times
- Assisting, as far as possible, the process of identification of the deceased
- Conducting a post-mortem investigation, including internal and external examination of the body and harvesting of material, tissue or fluids for evidentiary or diagnostic purposes
- Requesting and conducting appropriate special investigations
- Providing medico-legal reports, expert testimony and opinions
- Archiving documents, specimens and related materials

- Collecting, reviewing and analysing related data to determine trends or prevalence of incidents of unnatural death, and
- Providing information and advice to health or other government authorities or departments

According to Swanson et al. (2003:27), the role of the forensic pathologist includes investigating the cause of death, but it also includes the examination of the living to determine physical and sexual abuse. James and Nordby (2003:18) maintain that although forensic medical practitioner deal primarily with determining the cause of death, obtaining past medical history and understanding the issues raised by that history is generally the starting point of the process of death investigations.

Freckelton and Ranson (2006:307) indicate that the role of the forensic pathologist is as follows:

- Integrity of evidence. Ensuring that the integrity of evidence is not compromised;
- Ensuring the fair presentation of findings. Presenting findings and evidence in a balanced and impartial manner, and confining opinions to those based on personal skills and experience in the field, where appropriate;
- Understanding the criminal justice system. Recognising the importance of the disclosure of information to relevant parties;
- Service provision. The pathologist will address and, where possible, meet customers' needs, including timeliness, providing relevant information and communicating effectively with police officers and others in the investigative process.

Marais (1992:86) indicates that the forensic pathologist must reflect, in detail, his findings in the post-mortem report.

The researcher asked the participants what the role of the forensic medical practitioner is in the post-mortem investigation. They answered as follows:

- Nine police investigators, two forensic pathologists and one forensic medical practitioner indicated that the forensic medical practitioner has to examine the dead body in order to establish the cause of the death.
- Ten police investigators and two prosecutors indicated that the forensic medical practitioner has to compile a post-mortem report after conducting a post-mortem examination.

- One forensic medical practitioner indicated that a possible time of death has to be investigated by the forensic medical practitioner or forensic pathologist.
- One prosecutor cited that the forensic medical practitioner has to indicate the race, gender and age, with a full description of the victim, in the post-mortem report. He indicated that the forensic pathologist or forensic medical practitioner has to write an affidavit in terms of Section 212(4) of the Criminal Procedure Act, detailing his key findings. He went further to unfold that the forensic pathologist or forensic medical practitioner may be required to testify about his findings in person, in court.

The researcher learned that the literature and the participants generally, agree that the forensic medical practitioner has to conduct a post-mortem examination as a way of investigating the cause of death.

2.15 THE USE OF THE POST-MORTEM REPORT BY THE PROSECUTOR

In terms of Section 4 of the Inquest Act 58 of 1959,

"1. The police investigator investigating the circumstances of death or alleged death of any person shall submit a report thereon, together with all relevant statements, documents and information, to the prosecutor who may, if he deems it necessary, call for additional information regarding death."

Section 5 of this Act further states that if the prosecutor decides not to institute criminal proceedings, he shall submit all the statements, etc. to the magistrate who, if it appears to him that:

"(a) A death has occurred, and

(b) that such a death was not due to natural causes, shall proceed to hold an inquest as to the circumstances and cause of the death."

According to Steyn (1992:28), the inquest dockets should be submitted to the magistrate by the prosecutor. Prosecutors should therefore acquaint themselves with the relevant circulars and ensure that the provisions of these circulars are complied with. The author goes further to indicate that the prosecutor should ensure that the investigation is complete before submitting the docket to the magistrate. The researcher asked the participants what the use of the post-mortem report is to the prosecutor. They answered as follows: All 26 participants indicated that the role of the prosecutor is to use the post-mortem report as evidence of the cause of death during a criminal trial.

The researcher compared the answers of the literature and participants, respectively, and he noted that they agree that the role of the prosecutor is to use the post-mortem report as evidence during a criminal trial.

2.16 SUMMARY

In order to understand the post-mortem report, it is important for police investigators to familiarise themselves with criminal/forensic investigation objectives, unnatural death, the necessity for conducting an inquest, and the reasons why a post-mortem report has to be compiled. This chapter also explained the standard procedures in the post-mortem investigation, the role of the police investigator in the post-mortem examination, the role of the forensic medical practitioner in post-mortem investigation, as well as the use of the post-mortem report by the prosecutor. The next chapter discusses how the post-mortem report can be used as a source of information in the investigation of murder, to individualise crime, identify crime and trace suspects.

CHAPTER THREE

POST-MORTEM REPORT AS SOURCE OF INFORMATION

3.1 INTRODUCTION

This chapter deals with the post-mortem report as a source of information. The researcher focuses much on the information which forms building blocks for a good postmortem report, such as the identity of the deceased. The researcher also addresses concepts such as identification, chain of evidence, and the collection, packaging and sending of exhibits. The crux of the discussion revolves around the understanding of the post-mortem report as an investigative tool in murder cases. The discussions go further to cover the following: information on the post-mortem report to be used for identification of crime, individualisation of crime, and tracing of the suspects.

3.2 MURDER

Joubert (2001:105) illustrates that the specific conduct required to constitute murder, is causing another person's death. She adds to this by explaining that since the death of a person must be caused, murder can be committed in various ways – for instance, shooting a person with a gun, stabbing with a knife or strangling them. It is not relevant which method causes the death, as long as the person is killed as a result of the method. She continues to reveal that the killing of another person will not constitute murder if a ground of justification, such as private defence or officially capacity, justified conduct. Joubert (2001:106) concludes by indicating that it is a requirement that the act of the killer be intentionally. Gilbert (2004:275) puts it practically when he indicates that a person, who kills an individual without lawful justification, commits murder, if such person performs the acts that the cause of death and:

- 1. he either intends to kill or do great bodily harm to that individual or another; or knows that such acts will cause death to that individual or another.
- he knows that such acts create a strong probability of death or great bodily harm to that individual or another.
- 3. he is attempting or committing a forcible felony other than voluntary manslaughter.

The researcher asked the participants what murder is. They answered as follows:

- The participants reflected that murder is the unlawful and intentional killing of another person.
- In addition to this two police investigators and one prosecutor indicated that in murder it is immaterial what object is used to kill, as long as a person dies.

The researcher compared the viewpoint of the literature and participants, and he discovered that there is no difference, since they all indicated that murder is the unlawful and intentional killing of a person. As can be seen from the participants' responses, one participant could have provided more than one answer, hence the difference in the number of participants.

3.3 IDENTIFICATION

According to Marais (1992:18), identification rests on the theory that everything in the universe is unique in that it has certain distinctive, individual and class characteristics. He goes further to indicate that the views concerning the concept of identification differ among the various sciences, but it is generally applied by those sciences to place an object into specified groups, that is, to pinpoint an object as belonging to a specific class of objects.

The police investigator must make arrangements for the body to be identified by the deceased's next of kin. The investigator has to employ various investigation approaches available, in order to find the deceased's next of kin (Barnard, Cronje, De Klerk, Van Zyl & Zinn, 2002:330). Marais (1992:21) explains that identification of persons living or dead is a form of identification that can be direct or indirect. Direct identification refers to identification of persons on the grounds of direct experience, observation and the memory image created thereby.

In this study it revolves, particularly, around the identification of someone as a specific person. Indirect specification takes place by means of fingerprints and other physical evidence, circumstances or phenomena. Van der Westhuizen (1996:138) becomes more relevant and specific when he reveals that the identification of unknown human remains constitutes a fundamental issue in the practice of forensic science and criminalistics. The key to successful identification lies in teamwork involving other forensic scientists, such as physical anthropologists, forensic dentists, radiologists and criminalistics experts, whose pooled knowledge may be required for conclusive identification of the deceased.

Van der Westhuizen (1996:138) goes further to cite that because identification of unknown human remains is based upon comparison of unknown information derived from records with data obtained by post-mortem examination, the following records are his suggested comparison with the investigative and post-mortem findings:

- Reports of missing persons filed with the police
- Fingerprints
- Dental records
- Previous medical records which include past medical history
- Laboratory records, which includes blood group
- Ante-mortem x-rays
- Employment records
- Police records

Marais (1992:138) concludes by indicating the importance of accurate identification of unknown human remains, as impacting on the following:

- Notification of next of kin
- Completion of official records
- Settlement of insurance claims
- Use in criminal court cases, especially murder

Jackson and Jackson (2004:339) concur with Marais when they emphasise that the identification of the deceased person is an integral part of the post-mortem examination. Correct identification is essential for several reasons, including humanitarian considerations and legal requirements, and is of particular importance where the death of an individual is criminal or suspicious in nature and therefore the subject of police investigation. They are quick to point out that identification of the individual by visual clues becomes progressively more difficult as the body of the person concerned is in a decomposed state. Again, identification may be disturbed if the corpse has been subjected to dismemberment or mutilation. Although it is difficult to identify a decomposed and/or skeleton corpse as alluded to above, it is still possible. Jackson and Jackson (2004:347) continue by citing the case of Mrs. Rachel Doblain. The Home Office pathologist, Dr Keith Simpson, was called in to examine the remains. He established that the victim was female, and noted that her hair, which was dark brown, was starting to turn grey. He estimated her height at around five feet (1,52 m) and that she had been dead for between 12 and 18 months. The presence of a blood clot in the voice box strongly pointed to manual strangulation as the cause of death. Post-mortem examination of the remains also showed that the uterus of the victim was enlarged, due to the presence of a fibroid tumour. After consulting the record of missing persons, the police came up with a potential match, that of Mrs Rachel Doblain, aged 47 years, who had been reported missing about 15 months earlier. As well as concurrence between her age, height and the date of her disappearance, ante-mortem medical records revealed that she had indeed been suffering from a fibroid tumour. However, odontological evidence was crucial, through the comparison between the teeth of the upper jaw, which had undergone extensive dental treatment, and Mrs. Doblain's meticulous ante-mortem dental records demonstrated an exact match.

The researcher inquired from the participants what the meaning of identification is. They answered as follows:

- Nine police investigators and two prosecutors indicated that identification is about identifying the suspect.
- Four police investigators indicated that identification is about identification of the crime scene and exhibits.
- Three police investigators indicated that identification is about identifying the witnesses.
- One police investigator and one prosecutor indicated that identification refers to identifying anything relating to the committed crime.
- Two forensic medical practitioners, two forensic pathologists and one police investigator revealed that they understood identification as a way of identifying the deceased in so far as the gender, race, age and injuries sustained by such deceased is concerned.

The literature gives the meaning of identification, while the participants give categories instead of the meaning of identification. The researcher is of the opinion that the failure of the participants to give the exact meaning of identification was not a problem in the execution of their duties, since they showed an understanding of its categories.

3.4 INDIVIDUALISATION OF CRIME

According to Marais (1992:19), individualisation is only possible if it is preceded by a series of identification. Individualisation is based on and takes place through comparisons. He goes further to indicate that it refers to the demonstration that a particular sample is unique, even among members of the same class.

Van der Westhuizen (1996:06) indicates that individualisation involves comparison of disputed objects found at the scene of the crime with one of known origin, for example, from the suspected criminal. He continues to indicate that a process of individualisation takes place to determine individuality and it normally consists of identifications and comparisons which have a twofold aim, namely:

- To individualise positively the various objects in dispute
- To conclusively determine the criminal involvement of the object or person providing the standard of comparison.

Van Rooyen (2001:58) says that individualisation is complete when the object in dispute and the standard of comparison have the same origin.

The researcher asked the participants what individualisation of crime is. They answered as follows:

- Seven police investigators, three prosecutors, two forensic pathologists and one forensic medical practitioner indicated that individualisation is based on comparison of the items or objects.
- Five police investigators revealed that individualisation happens when, for instance, a firearm is identified as the object which caused death, based on the comparison of the bullet found in the deceased and the firearm in question.

- One forensic medical practitioner gave an example similar to the above by indicating that when poison is identified from the deceased body, it has to be compared with the poison found at the crime scene, as a way of identifying its origin.
- Seven police investigators do not know what individualisation is.

The researcher compared the viewpoint of the literature and the participants, and he established that seven police investigators do not know the meaning of individualisation of crime. It is surprising that approximately 37% police investigators who, according to an interview schedule, had at least five years' experience, and detective training, could fail to understand the meaning of "individualisation". It may be that, although the concept "individualisation of crime" is covered in their training manual, it is not well covered during their actual training.

3.5 CATEGORIES OF IDENTIFICATION

According to Van der Westhuizen (1996:6), there are eight important categories of identification:

- Situation identification relates to the crime situation, and individualises the unlawful nature of the situation. Marais (1992:04) indicates that the correct identification of the crime situation is of fundamental importance, because mistaken identification can give rise to the investigation being sent in the wrong direction, valuable evidence being lost and the hypothesis remaining unconfirmed.
- Witnesses' identification individualises the part of the alleged perpetrator by means of the account of events that emerges from the statements of complainants and witnesses.
- Victim identification this is discussed in detail under its own sub-heading further on in this chapter.
- Imprint identification attempts to achieve individualisation by comparing disputed imprints with a control imprint of the alleged object. Marais (1992:24) cites fingerprints as the most reliable method of identification. He is quick to point out that in some instances the corpse might be decomposed, or so badly mutilated that no fingerprints are available for comparison. He continues to show that if there are no before-death fingerprints available, then a complete set of the corpse's fingerprints will be valueless.

- Origin identification is mainly concerned with the analysis of organic and inorganic solids or fluids, to determine whether the disputed sample and the exemplar have a common origin. Marais (1992:131) unfolds the case wherein the accused lifted the victim over a barbed wire fence after which he raped and murdered her. A piece of material from the victim's dress remained snagged on the barbed wire fence. During comparison, it (the disputed sample) was found to match the dress material (comparison standard) of the deceased, and the accused was eventually convicted.
- Action identification refers to the identification of human acts that are directly related to the crime. Individualisation touches on the question of whether the disputed handwriting in a case of forgery, for instance is the work of a particular person. Joubert (2001:53) reveals that the establishment of the cause of death is important, in order to determine whether the death of the victim can be attributed to an act or the conduct of the perpetrator, or not. She further cites the facts in the case of *S v Mokegethi* 1990(1) SA 32 (A). The bank teller was shot by the bank robber, but he (bank teller) did not die. A few months later the bank teller died of septicaemia and the post-mortem report revealed that his death resulted from the shooting which had taken place a few months earlier. The court of law ruled that the bank robber was liable for the death in question.
- Culprit identification is concerned with the positive identification of the offender as a person, rather than the identification of his unlawful conduct. Marais (1992:04) reveals that the collection of information and facts, in order to determine the identity of the offender and his part in the crime, remains the crux of any crime investigation. He continues to indicate that the crime investigator can use various identification techniques, such as personal descriptions, voice identification, identification parades, photo identification, modus operandi, etc, for suspect identification.
- Cumulative identification is where contributions of different specialists are collectively considered within the framework of the history and relevant circumstances of the crime situation as a whole.

The researcher asked the participants what the categories of identification are. They answered as follows:

 Nineteen police investigators and three prosecutors indicated suspect identification.

- Seven police investigators further indicated fingerprint identification.
- Four police investigators further indicated crime scene identification as the category of investigation.
- Four police investigators further stated witness identification.
- One prosecutor also indicated that it is the identification exhibits.
- Two forensic pathologists and two forensic medical practitioners indicated the identification of the deceased as a category.
- One forensic pathologist further indicated that identification of the victim is the crux of a post-mortem report, and that it is usually done with the assistance of the victim's next-of-kin.

As can be seen from the responses, some of the participants gave more than one answer, which explains the reason why there appear to be more than 26 participants. The researcher noted that, although the literature and participants agree on what the categories of identification are, no single participant gave more than three of the eight categories of identification given in the literature. The limited understanding of the categories of identification by the participants may suggest that training need to be repeated in this regard.

3.6 VICTIM IDENTIFICATION

Victim identification concerns, in particular, the identification of the dead victim. Marais (1992:04) becomes detailed and specific by indicating that identification of a dead person can sometimes be difficult. However, the crime investigator can depend on the information which the scene could possibly offer. He goes further to reflect that clothes from the victim could possibly be the key to identification through, inter alia, identification marks, initials and dry-cleaning labels. Personal belongings may have unique engraving, repair and manufacturers marks which could lead to the positive identification of the victim.

In terms of Regulation 28 of The Regulations Regarding the Rendering of Forensic Pathology service of the National Health Act 61 of 2003, bodies of the deceased must only be identified by a spouse, partner, major child, parent, guardian, major brother, major sister, caregiver, or anyone who is in the possession of such deceased person's authentic identification document. Marais (1992:23–24) gives seven methods which can be used in the identification of the victim:

- Visual identification this is the identification by the next of kin of the deceased or victim.
- Identification by means of documents documents which can be at the crime scene or on the victim are, inter alia, identity documents, passports, letters, statements of account, etc.
- Identity by means of a photograph a colour photograph of the victim has to be disseminated and shown to the media.
- Identification by means of personal characteristics personal characteristics, such as deformities and scars, can help.
- Identification by means of clothing articles of clothing must be searched for identification marks.
- Identification by means of jewellery and watches some articles, e.g. watches, has unique features.
- Identification by means of identification marks marks can be viewed as contact marks, where a solid or liquid with the victim was transferred to his body and clothing. The contact marks are usually found on the skin.

The researcher asked the participants what victim identification is. They answered as follows:

- All 26 participants reflected that victim identification is the identification of the deceased person by family.
- Two police investigators further stated that it is sometimes difficult to identify the victim visually, due to decomposition.
- One police investigator further indicated that if it is difficult to identify the victim, documents, such as an identity document found in the pocket of the victim, can help in tracing the identity of such victim.

As can be seen from the responses, some of the participants gave more than one answer, which explains the reason why there appear to be more than 26 participants. Generally, the participants understood what victim identification is. However, the literature is very specific in revealing methods which can be used. The limited understanding of what victim identification is by the participants may suggest that training need to be repeated in this regard.

3.7 THE RESPONSIBILITY FOR COLLECTION, PACKAGING AND SENDING OF EXHIBITS FOR ANALYSIS

Van Heerden (1982:61) states that the taking of samples for further laboratory investigations forms an important part of the examination of a living or dead body. He goes further to indicate that the samples include those of blood, hairs, vaginal smears, intestines for toxicological investigation, tissue for histopathological investigation, fingernail scrapings, and a wide variety of foreign objects such as bullets.

In terms of Regulation 4 of the Regulations Regarding the Rendering Forensic Pathology Service of the National Health Act, 61 of 2003, the Forensic Pathology has the responsibility to: collecting, maintain evidence relating to a body and any associated items at all times, and conducting a post-mortem investigation, including external and internal examination of a body and harvesting of material, tissue or fluids for evidentiary of diagnostic purpose. According to Marais (1992:11), great care must be taken to collect all objects and samples intact, uncontaminated and unmutilated. He goes further to outline that identification, collection and preservation of each item should be conducted as a separate entity. All instruments used to collect them, and all containers holding the samples – such as bottles, test tubes and pillboxes – should be clean.

The researcher asked all the participants as to who has the responsibility for collection, packaging and sending exhibits for analysis. They answered that is the responsibility of the forensic pathologist or forensic medical practitioner to collect, package and send exhibits.

Specifically, the participants and literature agree that the collection and packaging of exhibits falls within the ambit of the forensic pathologist or medical examiner.

3.8 CHAIN OF EVIDENCE

Van der Westhuizen (1996:29) indicates that "chain of evidence" implies the continuous, safe possession and identification of physical information, which is also of the greatest importance for the purpose of individualisation. Bennett and Hess (2004: 92) reveal that "the value of evidence is affected by what happens to it after it is found". They again sensitise investigators to make sure that evidence does not lose its value (integrity) because of improper handling or identification. Integrity of evidence refers to the crime scene. This is recorded by chain of evidence documentation of what has happened to the evidence from the time it was discovered until it is needed in court – including every person who has had custody of the evidence, and why.

Fisher (2004:10–11) emphasises that it is important to understand the chain of custody or chain of evidence. A court will require proof that evidence collected during an investigation and evidence submitted to the court are one and the same. To prove that the integrity of the physical evidence has been maintained, a chain of evidence must be demonstrated. This chain shows who had contact with the evidence, at what time and under what circumstances, and what changes, if any, were made to the evidence.

Fisher (2004:11) continues to indicate that it might be put in a container with a label, or tagged. Identifying information, pertaining to the case, is written on the container or tag, as well as in reports and logs, to establish the chain. Police department policy may dictate which information is required, but usually the following types of information are needed to establish the chain of evidence:

- Name or initials of the individual collecting the evidence and each person subsequently having custody of it
- Date(s) the item was collected and transferred
- Agency, case number, and type of crime
- Victim's or suspect's name
- Brief description of the item

Marais (1992:15) emphasises the importance of the chain of evidence, and he goes further to give six guidelines in preserving the integrity of physical evidence:

- Limit the number of individuals who handle the evidence from the time it is found to the time it is presented in court.
- If the evidence leaves your possession, record in your notes when and to whom it was given, and when and by whom it was returned.
- Obtain a signed receipt from the person accepting the evidence.

- When the evidence is returned, check for your identification mark and ensure that it is the same item. Determine if it is in the same condition as it was when it was recovered.
- Any change in the physical appearance must be brought to the attention of the court.

According to Van der Westhuizen (1996:29), the degree to which physical integrity and chain of evidence is maintained determines the quality of substantive integrity, which implies the acceptability of physical crime information, its interpretation and the results of investigation. He goes further to reflect that the question of whether it meets all the juridical requirements for legal validity is consequently brought to the fore.

Marais (1992:15) emphasises that the integrity of physical evidence is often questioned by the defence in court. The correct methods applied during collection, marking and packaging of evidence may be nullified if an account cannot be given of persons who handled, evaluated or safeguarded the samples. According to Regulations 4, 5, 9, 11 and 28 of the Regulations Regarding the Rendering Forensic Pathology Service of the National Health Act, 61 of 2003, the forensic pathology service has to:

- remove and transport the body from the scene of death to the designated facility (storage).
- store the body of the deceased in the designated facility and also record admission and removal of such body for post-mortem examination.
- transport the body to the designated facility for the post-mortem to be conducted.
- make an arrangement that the body be identified by the next of kin or family members.

Chain of evidence was also emphasised in a court case in which the need for its maintenance was demonstrated in *S v Kaptein* 1984 (3) SA 316 (CPD), the Appeal Court requested the pharmacist (expert witness) to reweigh dagga, and the results reflected that the dagga weighed 7,5 grams less than its initial weight.

The results brought uncertainty regarding the handling of exhibits by SAPS members, and specifically about the following:

- Proper marking of the exhibit
- Number of individuals who handled the exhibit from the time it was found to its presentation in court
- No notification made to the court about any change in the physical appearance of the dagga

The researcher asked the participants what chain of evidence is. They answered as follows:

- Nine police investigators failed to indicate what a chain of evidence is.
- Ten police investigators and three prosecutors indicated that "chain of evidence" is the chain or logic of individuals who handled particular exhibits.
- One police investigator further indicated that the first person who handles the exhibit must write the statement about how it was found, and how it was handled, as well as to whom such an exhibit was handled in.
- Two forensic pathologists and two forensic medical practitioners indicated the chain of evidence as starting at dissection of the body during post-mortem, until the analysis stage.
- The same two forensic pathologists and only forensic medical practitioner further indicated that the forensic pathology officer dissects the body of the deceased person under the guidance and supervision of either the forensic pathologist or forensic medical practitioner.
- Moreover one forensic pathologist further indicated that the forensic pathologist or forensic medical practitioners packages and seals organs or exhibits which are handed to the forensic pathology officer who eventually sends them for analysis to the forensic chemistry laboratory.
- Finally two of the prosecutors went further to indicate, specifically, that the chain of evidence must include the following:
 - Who handled the exhibit?
 - The integrity of such exhibit on receiving and handing it over, and also to whom it was handed over.

As can be seen from the responses, some of the participants gave more than one answer, which explains the reason why there appear to be more than 26 participants. The researcher compared the viewpoint of the participants and literature, and he discovered that nine out of 19 police investigators do not understand the meaning

of "chain of evidence". He also discovered that ten police investigators, two forensic medical practitioners, two forensic pathologists and three prosecutors agreed with the literature. It is shocking that 47% police investigators, who, according to an interview schedule, had at least five years experience, and detective training, did not understand the meaning of "chain evidence". Chain of evidence is such a crucial element in Law of evidence and failure to adhere to this will have incredibly dire consequences. The researcher is of the opinion, based on his experience as a police investigator and detective trainer, that if the police investigator does not follow the proper chain of evidence in the process of crime/forensic investigation, the cases under investigation will not have evidential value during a court trial. He asserts the above on the knowledge and understanding that during a court trial the chain of evidence will be contested by the state and defence in cases where exhibits are involved.

The researcher studied 45 murder case dockets and he established that the case dockets had, respectively, the following documents attached to them:

- Police report accompanying the body to mortuary (45 case dockets)
- Affidavit by the ambulance attendant death took place outside the hospital (10 case dockets)
- Statement of the admission official at the hospital death took place in the hospital (22 case dockets)
- Statement of the doctor who treated the deceased at hospital death took place in the hospital (13 case dockets)
- Identification of body (45 case dockets)
- Affidavit by the mortuary attendant (23 case dockets)
- Affidavit by medico-legal aid (45 case dockets)
- Affidavit by pathologists (45 case dockets)
- Request for examination of a blood or other specimen (17 case dockets)
- Request of specimens (45 case dockets)

The researcher noted that all the case dockets complied with the required chain of evidence as far as the find of evidential documents is concerned. As can be seen from the above presentation, some of the case dockets are of the deceased who died in hospital, whereas the rest are of the deceased who dead outside the hospital, which explains the reason why there appear to be less than 45 case dockets in some brackets.

3.9 INDICATION OF THE AGE, SEX AND RACE OF THE VICTIM IN THE POST-MORTEM REPORT

According to Marais (1992:26), before an investigator can positively establish the identity of a corpse, he must have knowledge of certain class characteristics of the person, such as race, sex, age, etc.

According to Swanson et al. (2003:184–185), race or ethnicity and sex should appear on the report. They go further to give an example of how it should appear on the report. Sex, for example, is indicated as W/F – meaning white female. They continue to reveal that on entries requiring only a person's age, it should be indicated as at the last birthday. For example, July 19, 1977 would be recorded as 19/07/1977. For certain parties, such as an identified deceased person, or a suspect whose identity has not been established, age may be approximated or given in a narrow span of years – for example, "approximately 32 years" or "approximately 32–33 years".

According to Van der Westhuizen (1996:143), the indication of the sex of the victim makes the description of the victim clear. He goes further to reveal that in some instances victims are found in decomposed or skeleton stages. However, it is possible to establish their sex through features of the pelvic and skull bones. Van der Westhuizen (1996:42) makes us aware that dental development may provide an estimate of age in a victim or the deceased. He points out that the above techniques are particularly useful or important when only fragments of skeletal remains of the victim or deceased are present. The technique is aimed at assisting with the identification of the deceased person or the victim.

Van der Westhuizen (1996:142) goes further to indicate that the identification of the race of the victim or deceased is crucial, and useful, more especially, for decomposed or skeletal remains. Van der Westhuizen (1996:141–142) goes deeper by citing the importance of the victim's sex, age and race in the post-mortem report. He indicates that the sex chromosome count serves as a useful screening procedure for identification of sex. While advanced decomposition or mutilation may preclude determination of sex by chromosome count, other physical features may still be sufficiently preserved to enable sex determination.

When it comes to age, Van der Westhuizen (1996:142) confirms how reflection in the post-mortem report can be crucial, by citing that the radiological evaluation of centres of ossification and epiphyseal fusion, as well as dental development, may provide identification of an adult. During infancy and childhood, the teeth and the epiphyses of long bones are the most useful parameters for the determination of age. By twenty years of age, epiphyseal union of the ankle, hip and elbow can be observed. Of the skeletal parts, the skull alone yields reliable information on race and hair, and may be used in determination of race, by cross-section, although the characteristics are not always reliable (Van der Westhuizen, 1996:142).

The researcher studied 45 murder case dockets in order to establish whether the post-mortem report indicated the age, sex and race of the victim – all 45 post-mortem reports found in case dockets indicated age, sex and race of the victim.

3.10 INDICATION OF THE IDENTITY OF THE DECEASED PERSON IN THE POST-MORTEM REPORT

Marais (1992:21) reveals that by establishing the identity of the victim, the motive for the act can usually be determined. He points out that even in cases where the attacker was unknown to the victim, the identity of the victim can provide additional information to the police concerning their activities immediately before the attack, the time it took place, and other valuable information about the crime or events.

James and Nordby (2003:87) illustrate that the identity of the deceased person in the post-mortem report. They indicate that although identification is sometimes based on circumstantial evidence, such as clothing, location or pathological condition, most medical examiners and coroners require positive identification – that is, identification beyond a reasonable doubt. They go further to reveal that such identification requires a match using one or more of the following legally accepted techniques: DNA analysis, fingerprints, dental records, X-rays, or a uniquely identifiable medical apparatus such as an artificial joint.

The researcher studied 45 murder case dockets, in order to establish whether postmortem reports indicated the identity of the deceased, and he found that in all 45 murder case dockets the identity of the deceased was indicated as follows:

- Father identifying son (17 case dockets)
- Father identifying daughter (8 case dockets)
- Son identifying father (5 case dockets)
- Daughter identifying father (1 case docket)
- Mother identifying son (4 case dockets)
- Mother identifying daughter (3 case dockets)
- Son identifying mother (7 case dockets)

The literature illustrates that by establishing the identity of the victim, the motive for the act can usually be determined. It further emphasises that even in cases where the attacker was unknown to the victim, the identity of the victim can provide additional information to the police concerning their activities immediately before the attack, the time it took place, and other valuable information about the crime or events. All analysed case dockets indicated positive identification of the deceased by their next of kin.

3.11 INDICATION OF THE MANNER OF DEATH IN THE POST-MORTEM REPORT

According to Marais (1992:41), the determination of the manner of death, for example, whether death was natural or unnatural will assist in determining whether one person may be held liable for the death of another (victim). Van der Westhuizen (1996:116) indicates that the pathologist can only render his opinion, based on his judgement and professional experience, as to whether death can be classified as natural, accidental, suicide or homicide. He goes further to unfold that identification of the manner of death is important for two reasons:

- Many insurance policies carry specific clauses prohibiting payments to relatives in the event of suicide; due to the above clause the relatives may alter the suicide scene so that it appears to be a homicide.
- A murderer may alter the scene in order to conceal a homicide, so that the scene appears to be a suicide.

James and Nordby (2003:28) indicate that there are four manners of death: natural, accidental, homicide and suicide. Natural deaths are caused solely by disease, without the intervention of trauma. They go further to mention that the other manners of death all involve trauma. Accidental deaths are due to trauma occurring from acts that no reasonable person would have felt had a high probability of producing bodily injury or death.

James and Nordby (2003:28) also unfold that the difference between suicide and homicide is merely the person who acted. If the deceased took the action, then the death is a suicide. If someone other than the deceased took the action, the death is a homicide. Jackson and Jackson (2004:258) concur with James and Nordby (2003:28) when they reveal that in the case of a fatal shooting, the manner of death may be a homicide, an accident or a suicide. They go further to reveal that it is imperative that, if at all possible, the investigation into each such shooting indicates which of these has occurred. In England and Wales it is ultimately the role of the coroner to establish the manner of death. However, in cases of fatal shooting, the firearms examiner can play an important part in helping the coroner to complete this task.

The researcher studied 45 murder case dockets in order to determine whether they reflected the manner of death and found that in all 45 case dockets the causes of death was listed unnatural. The researcher understands, based on his experience as a police investigator, that any case docket which indicates the manner of death to be unnatural death should be investigated criminally.

3.12 INFORMATION IN THE POST-MORTEM REPORT TO BE USED DURING THE INVESTIGATION

Marais (1992:41) continues to expound that there is information required by the law in the case of an unnatural death, which is also of vital importance during the investigation of such death – namely, cause and time of death. He is quick to point out that this information is determined during the scene investigation post-mortem examination of the deceased. The following discussion will focus on the information in the postmortem report, which can be used for the identification of crime, tracing of suspects and individualisation of crime.

3.12.1 Information in the post-mortem report to be used for the identification of crime

The discussion hereunder focuses on the cause of death and types of wounds as the indication of the identification of crime.

3.12.1.1 Cause of death

According to Jackson and Jackson (2004:332), when an individual dies it is vital that the medical cause of death be established by a practitioner. They again indicate that, as circumstances dictate, this may occur either at the scene of death or, in the case of deaths reported to the coroner, at a later stage – usually after the performance of a post-mortem examination. The information concerning the medical cause of death is then entered on the death certificate, in accordance with international standards recommended by the World Health Organization.

Marais (1992:46) reveals that the crime investigator cannot be expected to determine the cause of death, since such a process is complicated and requires the advanced knowledge of the medical expert. He further illustrates that it is also essential for the police investigator to establish whether a person was murdered, or whether it is suicide, or an accident. Marais (1992:42–43) lists what is deemed the most common causes of death, as the following:

- Strangulation by the circular constriction of the neck with a bandage, rope or wire, this is accompanied by direct pressure. Strangulation can also be conducted manually by the application of direct pressure on the person's windpipe with the hands, fingers or forearm.
- Hanging in hanging, the victim could have been hanged to disguise the actual crime
- Suffocating this is the blocking of the pharynx, larynx or trachea (windpipe), by foreign objects
- Drowning one of the outstanding features in drowning being the white foam in the mouth and windpipe, caused by the mixing of mucus in the body with water
- Embolism this is the plugging of the blood vessels, particularly by fat and air
- Skull fracture it is usually accompanied by brain haemorrhage as a result of the damage to the surrounding tissues
- Fatal wounds for example, bullet, stab, cut and bruise wounds, where the body tissue is so badly damaged that normal body functions are destroyed by it
- Poisoning where tissue damage, shock and paralysis destroy physiological functions

Donson (2007:7) illustrates what are deemed the most common causes of death in South Africa, as the following: sharp wounds, firearm 9 gunshots), transport related accidents, blunt force injuries, hanging, burns and poisoning.

The researcher studied 45 murder case dockets, to establish whether there was an indication of the cause of death in the post-mortem reports. He found that:

- twelve case dockets indicated shooting as the cause of death.
- twenty-two case dockets indicated stabbing as the cause of death.
- nine dockets reflected blunt force as the cause of death.
- two case dockets indicated poisoning as the cause of death.

The researcher noted that all case dockets analysed indicated the cause of death. Based on his experience as a police investigator, the researcher understands that the indication of the cause of death as shooting reflects that a firearm was used, stabbing reflects that a knife or similar object was used and this gives the police investigator to trace, identify and individualise such object.

3.12.1.2 Types of wounds

Van der Westhuizen (1996:144–149) points out that the type of wound will be a guiding factor to knowing what kind of weapon was used, and lists the following wounds:

Abrasions

He reveals that the unfortunate feature of abrasions is that they may easily be produced after death from the handling of the body in the mortuary.

Contusions (bruises)

The degree of force required to cause bruising will vary from firm gripping to heavy blows with a fist, a booted foot or a blunt object. He points out that the absence of bruising does not indicate that blunt force has not been applied to that area.

Lacerations

Laceration wounds are caused by blunt objects such as bricks, rocks, branches or impacts with hard surfaces.

Incised wounds

An incised wound or cut is an injury caused by a sharp-edged weapon as it is drawn along the surface of the skin. The length of a wound is therefore usually greater than the depth. Incised wounds are caused by instruments, such as knives, razor blades or fragments of grass.

Penetrating incised wounds

These are wounds caused by sharp objects such as a knife or a sword, producing penetrating wounds, which are deeper than they are long.

Chopped wounds

These are, really, combinations of incisions and lacerations, produced by heavy, sharp-edged instruments, such as axes and pangas.

The researcher perused 45 murder case dockets and he found that:

- nine case dockets indicated laceration wounds.
- twenty-two case dockets indicated penetration.
- two case dockets indicated tissue damage.
- twelve case dockets indicated incised wounds.

The researcher analysed 45 case dockets, as reflected above, he noted that all case dockets indicated the type of wound sustained by the deceased person. The researcher is of the opinion, based on his experience as the police investigator, that the indication of the type of wound would assist the police investigator in knowing the type of object used by the suspect.

The researcher asked the participants as to which information one could get from the post-mortem report, for identification of crime:

- Thirteen police investigators, three prosecutors, two forensic pathologists and two forensic medical practitioners indicated cause of death and types of wounds.
- Two police investigators indicated an example of stabbing wounds as an identification method.
- One police investigator indicated gun wounds as a way of showing that the victim had been shot to death.
- Three police investigators failed to give an explanation.

The researcher compared the viewpoint of the literature and the participants, and he gathered that there is some difference, but it is pertaining categories and not classification. Three police investigators did not give clear, satisfactory answers, and the other three police investigators failed to give the answer. The researcher was surprised that police investigators with at least five years' experience, and detective training, could fail to answer the above question.

3.12.2 Information in the post-mortem report to be used for tracing the suspects

The following discussion focuses on the time of death and any other information which can be used to trace the suspect of a murder case. Time of death will be used as a point of departure in tracing a suspect. Becker (2009:288) indicates that tracing means using evidence to identify and locate a criminal.

According to Becker (2009:239), most criminal homicide investigations try to establish a time of death in order to:

- establish the victim's movements prior to death.
- establish the victim's activities prior to death.
- establish a suspect and witness pool. According to Barnard et al. (2002:209), the questioning of witnesses and victims is a proven method that is used all the time. For example, the investigator may ask someone who knows the whereabouts of suspects. They continue to indicate that the information given by the witness about the whereabouts of the suspect can be crucial during tracing.
- corroborate suspect's alibis. According to the World Book Dictionary (1994:53), an alibi is the plea or fact that an accused person was somewhere else when an offence was committed.
- establish some parameters for investigation.
- clarify anomalies at the crime scene.

Barnard et al. (2002:209) also indicates that the identification of exhibits or clues found at the crime scene can also be of assistance in tracing suspects. Gilbert (2004:307– 308) indicates that a crime scene has the potential to reveal other data that may prove very valuable in tracing the perpetrator of crime. He goes further to cite that during the flight, the offender will realise the incriminating value of the weapon used to commit the crime, but promptly dispose of it. Investigators should search for evidence outside the immediate scene – for example, in garbage cans, under bushes or parked cars, or on rooftops.

According to Marais (1992:46), an indication of the time of death is of vital importance to the crime investigator. With this information he can corroborate or refute an alibi, and he can trace the movements of the deceased at a specific time, which could corroborate or refute facts which he has collected. Palmiotto (2004:211) continues to show that it is impossible to indicate an accurate time of death, and he goes further to say that there are four ways the medical examiner can determine the approximate time of death. These are as follows:

Stomach contents

The post-mortem can identify and measure the contents of the stomach to determine when the person last ate. It takes two or three hours for digestion to occur.

Body heat

Placing one's hand on a protected portion of the body (usually under the arms) gives a rough determination of time. If it is warm, the body has been dead only a few hours.

Rigor mortis

This is the temporary rigidity of muscles after death, known as rigor mortis. Rigor mortis is present within 8 to12 hours of death. Bennett and Hess (2004:213–214) stress Palmiotto's viewpoint when they reveal that the medical examiner and the investigator must start working together from the crime scene, if they are to be successful in securing conviction of the suspect. They continue to agree with Palmiotto in mentioning what they call changes of the body after death – pre-sumably because of enzyme breakdown. It begins in the jaw and head 5 to 6 hours after death, and then moves downwards through the entire body.

Post-mortem lividity

When the heart stops beating at death, the blood no longer circulates, and gravity drains the blood to the body's lowest levels. Post-mortem lividity starts $\frac{1}{2}$ to 3 hours after death, and maximum lividity occurs within 10 to 12 hours. Lividity

position also assists in identifying whether or not the body has been removed. The blood settles to the lowest point of the body, due to gravity.

Examination of the eyes

The appearance of the eyes also assists in estimating the time of death. After death, eye muscle tone lessens and tends to disappear.

The researcher asked the participants as to what information in the post-mortem report can be used for tracing suspects. They answered as follows:

- Eleven police investigators and one prosecutor argue that not the post-mortem report, but the crime scene can assist with information in tracing the suspect.
- Seven police investigators, one prosecutor, two forensic pathologists and two forensic medical practitioners indicated that time of death can assist in tracing suspects.
- The remaining one police investigator and one prosecutor agree two forensic pathologists who furthered their assertion by indicating that cause of death will assist in tracing the suspect.

The researcher compared the viewpoint of the literature and the participants, and he established that seven police investigators, two prosecutors, two forensic pathologists and two forensic medical practitioners agreed that time of death is vital information in the tracing of suspects. He also noted that 11 police investigators who, according to the interview schedule, had at least 5 years' experience, and detective training, did not know that time of death can assist in tracing the suspect.

3.12.3 Information in the post-mortem report to be used for individualisation of crime

According to Becker (2009:34), trace evidence is extremely susceptible to contamination. He goes further to indicate that trace evidence is usually undetectable by the naked eye and must undergo extensive laboratory procedures before it can be preserved and used later at trial. Items of evidence, such as blood, fingerprints, hairs, fibres, footwear, broken glass, tool marks and paint scrapings are easily destroyed, altered, or contaminated. Trace evidence as information to be used for individualisation of crime, is discussed further on.

3.12.3.1 Hair

Marais (1992:103–104) cites that it is possible to answer the question of whether a hair comes from a given individual, with an amount of certainty. It is the primary task of the forensic experts to compare disputed samples with comparison standards. He goes further to create awareness that disputed samples are hairs found at the scene of crime, while comparison standards are, for example, hairs found on the suspect.

3.12.3.2 Blood

Marais (1992:119) quotes a case wherein a blood sample was drawn from the victim during the post-mortem examination, and the blood was compared with bloodstains found at the crime scene, and evidence was adduced to prove that the deceased had been at the crime scene. According to Gilbert (2004:318), because of the violent nature of homicide and aggravated assault, blood is a very common type of evidence. He goes further to indicate that the investigator may encounter blood evidence in one or more of four general areas:

- On the victim
- On the offender
- Within the crime scene
- On a weapon

3.12.3.3 Semen

Van der Westhuizen (1996:206) indicates that semen plays an important role in the nature of things when evidence is given in sexual crimes, such as rape, sodomy, incest and bestiality. He quotes Inbau, who unfolds that murder and rape often go hand in hand. Becker (2009:299) explains that seminal stains may be found at the crime scene and on the suspect. Barnard et al. (2002:19) reveal that physical evidence, such as blood, semen and other bodily fluids provide indisputable evidence of individualisation.

3.12.3.4 Primer residue

Marais (1992:164) indicates that the only reliable manner of connecting a suspect positively with a firearm is when his fingerprints are found on the firearm. He continues to cite that the evidential value is increased, if it can be specifically proved that a

suspected person discharged the firearm. When a firearm is discharged, gases are forced out through every opening in the firearm. Among others, as he goes further, these gases contain powder and prime residue.

Gilbert (2004:268) concurs with Marais, above, but he takes the argument further by mentioning that if the suspect is arrested shortly after the discharge of a weapon, an effort may be made to demonstrate that the suspect recently fired a gun. He alerts us that such a determination cannot identify the individual as the person who fired the specific crime scene weapon, but it can serve to focus the investigation towards that individual.

3.12.3.5 Poison

Becker (2009:246) cites that poison can be traced in blood, urine, stomach contents, hair and nails. On a body, maggots may be a source of information about how the victim died. Marais (1992:81) cites that the identification of the drug or poison used to cause the death is a highly technical procedure of chemical analysis. The toxicological examination includes the analysis of the suspected material submitted by the crime investigator, as well as the analysis of organs removed from the victim during post-mortem examination.

The researcher asked the sample what information on the post-mortem report can be used for the individualisation of crime. They answered as follows:

- All 26 participants indicated blood.
- Ten police investigators, two prosecutors, two forensic pathologists and one forensic medical practitioner further indicated bullets which can be found in the deceased's body.
- One prosecutor also indicated that the bullet, if retrieved from the deceased's body, can be compared with either the cartridge or the firearm, as a way of individualisation.

From the answers to the question it seems that the last have a better understanding of the question or their experience took them further than that of the others. From the literature and the participants it appears the difference is that the literature is more in-depth in outlining the information to be used for individualisation. The lake of indepth on the part of participants may perhaps be revealing their ignorance pertaining the topic or absence of sufficient training in this regard.

3.13 SUMMARY

The preceding discussions were centred on the information obtainable from the post-mortem report, to assist in the investigation of murder cases. It is evident, from the discussions, that identification of victims and categories of identification are of the utmost value in murder investigation. The study also indicates to what extent the chain of evidence is important in assisting with the understanding of the handling of the deceased person. The crux of the chapter is in outlining information which can be of value in the identification of crime, tracing of suspects and individualisation of crime.

The following chapter focuses on the findings and recommendations regarding chapters two and three respectively.

CHAPTER FOUR FINDINGS AND RECOMMENDATIONS

4.1 INTRODUCTION

This is the final chapter of the study, unfolding findings and recommendations. The aim of the study was to establish how a post-mortem report can be of value in supplying information for the identification of crime, individualisation of the crime, and the tracing of suspects in the investigation of a murder. The researcher collected data from literature, case docket analyses as well as interviews with police investigators, prosecutors, forensic medical practitioners and forensic pathologists.

To address the aim of the study, the researcher employed two research questions which guided the whole study, namely:

- How should a post-mortem report be understood?
- What information could be obtained from the post-mortem report to assist in, inter alia, the identification of crime, the individualisation of crime and tracing the suspects, in the investigation of murder?

4.2 FINDINGS

These are primary findings emanating from the research questions, and are also based on information collected from national and international literature, from the participants, as well as from case docket analysis.

4.2.1 Findings on research question one

How should a post-mortem report be understood?

In this research, based on information from literature and interviews conducted, the following was found to be clear:

Post-mortem

The study revealed that a post-mortem is the examination of a dead body, to establish the cause of death. Generally, the participants do not what understood what a post-mortem is.

Post-mortem report

A post-mortem report is a permanent, written record of important facts, made during or immediately after conducting the post-mortem. It can be used to examine the past, keep the police officers informed of the cause and time of death, continue investigations, prepare court cases and provide the court with relevant facts, and coordinate a law enforcement activities plan for future law enforcement officer performance. The post-mortem report should give guidance on whether the cause of death was, for example, stabbing, shooting, strangulation, or other means. In terms of Section 212 of the Criminal Procedure Act 51 of 1977, a post-mortem report may be handed to the court in the form of an affidavit, meaning that the forensic medical practitioner who conducted the post-mortem examination does not necessarily have to testify in person. It is also shocking to note that the only participants were familiar with what a post-mortem report is. The majority (15) indicated what a post-mortem report should contain and not what it is.

Mandated person to conduct a post-mortem

The researcher noted that the literature and participants did not differ in understanding that the forensic medical practitioner or forensic pathologist is mandated to conduct a post-mortem report.

The reason for compiling the post-mortem report

The research established that a post-mortem report has to be compiled, so that there may be a permanent, written record to be used as evidence in a court of law. Generally, the participants understood the reason for compiling the post-mortem report.

The role of the police investigator in the post-mortem examination

The researcher found that the literature indicates that the role of the police investigator is to investigate the cause of death, and also to ensure prosecution, as a result. The participants indicated that the police investigator has to give a detailed report of the incident to the forensic pathologist or forensic medical practitioner, assist in the identification of the deceased, and also be available as a witness to the post-mortem. The researcher understands that both the participants and the literature are correct, because the role of the police investigator in post-mortem examination covers all that have been indicated above.

The role of the forensic medical practitioner

The researcher found that the literature and the participants agreed that the forensic medical practitioner has to conduct a post-mortem examination as a way of ascertaining/ establishing the cause of death.

The use of the post-mortem report by the prosecutor

The research established that prosecutors use the post-mortem report as evidence of the manner, possible time and cause of death, during a state trial. Generally, the participants were familiar with the use of the post-mortem report by the prosecutor.

4.2.2 Findings on research question two

What information could one obtain from the post-mortem report to assist in, inter alia, the identification of crime, the individualisation of crime and tracing the suspects, in the investigation of murder?

This study, based on literature reviews, interviews, personal experience and case docket analysis, revealed that the following kind of information could be obtained from the post-mortem report:

- Age, sex and race of the victim clarify the description of the victim (deceased person) because sometimes it happens that the victim cannot be identified visually, due to decomposed or skeleton stages.
- Identity of the deceased person can provide additional information to the police concerning their activities before the attack and at the time of the attack, and vital information about crime or events.
- The type of wound sustained by the victim (deceased person) will assist the police investigator in possibly revealing the type of weapon used by the murderer.
- The researcher noted that generally, the participants understand what information could one obtain from the post-mortem report to assist in the identification of crime, but he also noted that three participants (police investigators) have no clue.

Tracing of suspects: The possible time of death can corroborate or refute an alibi – the investigator can trace the movements of the deceased at a specific time, which could corroborate or refute facts which he has collected. If the time of death is known, it will be possible to link the suspect, based on corroboration of an alibi. The research also pointed out that most criminal homicide investigations try to establish a time of death in order to: establish the victim's movements prior to death; establish the victim's activities prior to death; establish a suspect and witness pool; establish some parameters for investigation; and, clarify anomalies at the crime scene. The research revealed that the participants understood that time of death can be used in tracing the suspect. However, 11 police investigators who, according to the interview schedule, had at least 5 years' experience, and detective training, did not know that time of death could assist in tracing the suspect. From the above discussion, the researcher noted that it became clear that if the time of death is reflected on the post-mortem report, the police investigator will be able to trace the suspects, based on the refuting or corroborating of his alibi.

Identification of crime:

- The cause of death this can assist in determining whether the death can be attributed to the act or conduct of the offender or perpetrator. The research also reveals what are deemed the most common causes of death in South Africa, as the following: sharp wounds, firearm 9 gunshots), transport related accidents, blunt force injuries, hanging, burns and poisoning.
- Types of wounds these will indicate what kind of object was used to commit the crime, such as: Abrasions, contusions (bruises), lacerations, incised wounds, penetrating wounds and chopped wounds.
- Individualisation of crime: Trace evidence such as blood, semen, poison, etc.
 will be found on the body of the suspect, and will also assist in individualisation of crime.
- All case dockets indicated the age, sex or race of the victim, the identity of the deceased, the type of wounds sustained by the victim, time of death and cause of death.

4.3 SECONDARY FINDINGS

These are secondary findings emanating from the research questions and are also based on information collected from national and international literature, the participants, as well as case docket analysis.

4.3.1 Forensic investigation

The research revealed that forensic investigation is an investigation aimed at instituting either criminal or civil proceedings, and is also scientific-centred. The researcher noted that only three participants talk about the gathering of information/evidence to institute prosecution and the last five officials equate it to criminal investigation. He also noted that the viewpoint of the rest of the participants is too narrow.

4.3.2 Crime investigation

The researcher noted that the answer given by nineteen police investigators is one dimensional compared to how multi-dimensional the rest (07) of the participants were. He also compared the viewpoint of the literature and the participants and he noticed that seven participants agree with the literature that crime investigation is the process of evidence gathering in order to prosecute the suspect in criminal court.

4.3.3 The difference between forensic investigation and crime investigation

The researcher compared the definitions of the authors and the participants on the difference between forensic and crime investigation. He noted that although forensic investigation also includes civil proceedings, it has a similar meaning to criminal investigation.

4.3.4 Objectives of forensic/crime investigation

The research established that the objectives of crime investigation are as follows: to determine whether a crime has been committed; to legally obtain information and evidence to identify the responsible person; to arrest the suspect; to recover stolen property; to present the best possible case to the prosecutor; and, to individualise crime. The researcher establishes that no single participant gave more than two of the six objectives given in the literature. This would mean that the understanding of the participants is narrow in this regard.

4.3.5 Investigation of unnatural death

The research pointed out that unnatural death has to be investigated for the establishment of the real cause of such death. The participants also understood the reason for investigating unnatural death as a way of establishing the cause of death, gathering evidence about the death, arresting the suspect and prosecuting the perpetrator. No participant mentioned more than one reason for conducting an inquest.

4.3.6 The necessity for conducting an inquest

The study indicated that the necessity for conducting an inquest is to establish whether death was natural or unnatural, and also to establish who may be liable for such death. The reason for determining the identity of the perpetrator is itself determined by the will to satisfy the public about the handling of unnatural death investigation. The participants understood the necessity of conducting an inquest.

4.3.7 Murder

It was established that murder is the unlawful and intentional killing of a human being. Generally, the participants understood the meaning of "murder".

4.3.8 Identification

Identification rests on the theory that everything in the universe is unique in that it has certain distinctive, individual and class characteristics. The literature gives the meaning of identification, while the sample gave categories instead of the meaning of identification. The researcher is of the opinion that the failure of the participants to give the exact meaning of identification was not a problem in the execution of their duties, since they showed an understanding of its categories.

4.3.9 Individualisation of crime

The research unfolded that individualisation involves comparison of disputed objects found at the crime scene, with the objects' known origin. The process of individualisation takes place to determine individuality, and it normally consists of identification and comparisons – which have a twofold aim:

- To individualise positively the various objects in dispute
- To conclusively determine the criminal involvement of the object or person providing the standard of comparison

The researcher compared the viewpoint of the literature and the participants, and he established that seven police investigators do not know the meaning of individualisation of crime. It is surprising that approximately 37% police investigators who, according to an interview schedule, had at least five years' experience, and detective training, could fail to understand the meaning of "individualisation of crime". It may be that, although the concept "individualisation of crime" is covered in their training manual, it is not well covered during their actual training.

4.3.10 Categories of identification

It was established that there are eight categories of identification, namely: situation identification, witness identification, victim identification, imprints identification, original identification, action identification, culprit identification and cumulative identification. The researcher noted that, although the literature and participants agree on what the categories of identification are, no single participant gave more than three of the eight categories of identification given in the literature. The limited understanding of the categories of identification by the participants may suggest that training need to be repeated in this regard.

4.3.11 The responsibility for collecting, packaging and sending of exhibits

According to the study, collection and packaging of exhibits is done by a forensic pathologist or forensic medical practitioner, while the sending is done by the police investigators. The participants understood the responsibility of collection, packaging and sending of exhibits.

4.3.12 Chain of evidence

It came to the fore that the concept "chain of evidence" implies the continuous safe possession and identification of physical information, which is also vital for individualisation purposes. The research revealed that nine out 19 police investigators did not understand the meaning of "chain of evidence". It was also discovered that ten police investigators, two forensic medical practitioners, two forensic pathologists and three prosecutors agreed with the literature. It is of concern that police investigators, who, according to the interview schedule, had at least five years' experience, and detective training, did not understand the meaning of "chain evidence". This would mean that a training intervention is required in this regard. All case dockets analysed by the researcher had an easy-to-follow chain of evidence.

4.4 RECOMMENDATIONS

The following recommendations are made on the basis of the facts which unfolded during the research process. In chapter one, the researcher indicated that the aim of this research was to establish how a post-mortem report could be of value in supplying information for the investigation of a murder, for identification of crime, individualisation of crime and tracing of suspects.

The researcher covered the research question, aims and purpose. Some concepts were not covered satisfactorily in some of the literature, and the participants also did not have enough knowledge of such concepts.

It is recommendations that further research be undertaken in the following areas:

- The post-mortem
- The post-mortem report and what it entails
- Reasons for compiling the post-mortem report
- The mandated person to compile the post-mortem report
- The role of the police investigator in the post-mortem examination
- The role of the forensic medical practitioner in the post-mortem investigation
- The use of the post-mortem report by the prosecutor
- Tracing of suspects, identification and individualisation of crime

The following recommendations revolve around areas wherein the participants were seen to be having little or no knowledge at all. In order to improve the skills and awareness of the participants, it is recommended that training intervention be conducted to address the following concepts:

To police investigators:

- Forensic investigation
- Crime investigation
- Objectives of forensic/crime investigation
- Post-mortem report
- Tracing of suspects
- Identification
- Individualisation of crime
- Categories of investigation
- Chain of evidence

To prosecutors:

- Forensic investigation
- Objectives of forensic/crime investigation
- Post-mortem report
- Identification
- Categories of investigation

To forensic pathologists and medical examiner:

- Forensic investigation
- Objectives of forensic/crime investigation
- Identification
- Categories of investigation

4.5 CONCLUSION

The study was centred on vital concepts which need to be understood in order to better understand a post-mortem report. It came to the fore that literature does not satisfactorily cover many of the concepts, such as: "reasons for compiling the post-mortem report", "the role of the police investigator in the post-mortem examination", "the role of the forensic medical practitioner in the post-mortem investigation" as well as "the use of the post-mortem report by the prosecutor". The participants also do not have in-depth knowledge of the above concepts.

Concepts such as "forensic investigation", "identification", "unnatural death", "inquest" and "chain of evidence", as well as the collection, packaging and sending of exhibits, were also covered. These concepts were seen to be the building blocks in the understanding of a post-mortem report.

The research revealed that the participants had its shortcomings when it came to the understanding of concepts such as "objectives of the forensic/crime investigation", "identification", "categories of identification" and "chain of evidence".

Police investigators, as the designated individuals charged with the responsibility of investigating murder cases, need to familiarise themselves with the information obtainable from a post-mortem report, so that they can be in a position to identify crime, trace suspects and individualise crime. These shortcomings, revealed above, can lead to poor investigation of murder cases. The preceding study highlights that more research is still needed, in order to empower police investigators in training as well as in education.

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ANNEXURE A

INTERVIEW SCHEDULE

The post-mortem report as a source of information in the investigation of murder

Research questions

- How should a post-mortem report be understood?
- What information could one obtain from the post-mortem report to assist in, inter alia, the identification of crime, the individualisation of crime and tracing the suspects, in the investigation of murder?

Historical information

- 1. What are the responsibilities in your current employment?
- 2. For how many years have you been in your current employment?
- 3. What are your academic qualifications?
- 4. Which organisation are you working for?
- 5. Did you attend any courses/seminars related to your current employment?

Understanding post-mortem report

- 6. What is the meaning of forensic investigation?
- 7. What is the meaning of crime investigation?
- 8. What is the difference between forensic and crime investigation?
- 9. What are the objectives of forensic/crime investigation?
- 10. What does the "investigation of unnatural death" mean?
- 11. What is the necessity of conducting an inquest?
- 12. What is "post-mortem"?
- 13. What is a post-mortem report?
- 14. Who has the mandate to conduct a post-mortem?
- 15. Why should a post-mortem report be compiled?
- 16. What are the standard procedures in dealing with post-mortems?
- 17. What is the role of a police investigator in post-mortem examination?
- 18. What is the role of the forensic medical practitioner in post-mortem investigation?
- 19. How can the prosecutor use the post-mortem report?

Post-mortem report as a source of information

- 20. What is murder?
- 21. What is the meaning of "identification"?
- 22. What is individualisation of crime?
- 23. What are the categories of identification?
- 24. What is the meaning of "victim identification"?
- 25. Who has the responsibility for collection, packaging and sending of exhibits for analysis?
- 26. What is "chain of evidence"?
- 27. Did the post-mortem report indicate the age, sex and race of the victim/deceased?
- 28. Did the post-mortem report indicate the identity of the deceased person?
- 29. Did the post-mortem report indicate the manner of death?
- 30. What information can be used for the identification of crime?
- 31. What information can be used for the tracing of suspects?
- 32. What information can be used for the individualisation of crime?

ANNEXURE B

RECOMMENDATION FROM SAPS

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Sautu	h African Police Service	- Suid-i	Mrikaanse Polisiediens		
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MY F	R REFERENCE / U VERWYSING REFERENCE / MY VERWYSING UIRIES / NAVRAE NO	3/34/2 S/Supt J Schnetler /Supt GJ Joub (012)393 3177 / 3118	THE HEAD STRATEGIC MANAGEMENT PRETORIA 0001 en 20 June 2007		
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<i>\$.</i>	In accordance with N	ational Instruction 1/200	6 Research in the Service,	you are	

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requested to consider the application and to communicate your decision to this office.

Kind Regards

ASST-COMM HEAD STRATEGIC MANAGEMENT G E MOORCROFT

ANNEXURE C

PERMISSION FROM SAPS

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ANNEXURE D

PERMISSION FROM HEALTH DEPARTMENT

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	Enquiries: Malomane EL
	Ref: 4/2/2
30 Septe	ember, 2008
Mr. H.P	Bila
P O BO	X 3713
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Dear Mr	H.P.Bila
	 Permission is hereby granted to <u>Mr. H.P. Bila</u> to conduct a study as mentioned above in Mopani district, in Limpopo Province <u>The Department of Health and Social Development will expect a copy of the completed</u>
	 research for its own resource centre after completion of the study. The researcher is expected to avoid disrupting services in the course of his study
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	 The Researcher/s should be prepared to assist in interpretation and implementation of the recommendations where possible
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