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AN EXPLORATION OF SLOUGH SKIN CELLS AS PHYSICAL EVIDENCE IN RAPE CASES IN GAUTENG

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Abstract

The scientific study and exploration of slough skin cells as physical evidence found at rape crime scene have helped in solving rape cases resulting in the identification, linkage and apprehension of perpetrators. Therefore, investigation of rape is heavily reliant on the collecting, handling and preservation of physical evidence, which often provides the court with conclusive proof of solving this crime. For rape cases, the body of the victims and perpetrators and locations where rape occurs can present physical evidence. This study explored slough skin cells in rape cases as a source of Deoxyribonucleic Acid evidence to identify and link suspects to rape cases. The aim of this study was "to explore slough skin cells as physical evidence in the investigation of rape in Gauteng Province". This qualitative study employed the phenomenological research design. Twenty (20) forensic investigator participants attached to the South African Police Service Local Criminal Record Centre (SAPS LCRC) from Krugersdorp were chosen through purposive sampling as they oversaw conducting forensic investigations at rape crime scenes. Semi-structured one-on-one interviews were adopted as the data collection method. Data collected was analysed using thematic analysis. This study revealed that Krugersdorp SAPS LCRC forensic investigators adhere to and comply with the SAPS guidelines while investigating rape cases in GP. The focus was on the experiences of SAPS LCRC Krugersdorp forensic investigators as it is their responsibility to forensically investigate rape crime scenes in terms of the SAPS LCRC Crime Scene Policy (2005) and SAPS National Instruction (NI) 1 of 2015 on Crime Scene Management. This study highlighted the importance of complying and adhering to the set guidelines when investigating rape cases for slough skin cells as physical evidence. This study, therefore, recommends that non-compliance with the SAPS guidelines of NI 1 of 2015 on Crime Scene Management must be dealt with according to the SAPS Disciplinary Regulations 1 of 2016. Furthermore, it is recommended that the SAPS LCRC CSI policies be reviewed and updated quarterly to keep up with new technology. In addition, it is recommended that the SAPS review and upgrade SAPS LCRC training course materials and manuals and incorporate slough skin cells as physical evidence.

Keywords: Criminal investigation; Crime scene, Deoxyribonucleic Acid, Forensic investigation; Locard Exchange Principle, Physical evidence; Rape; Slough skin cells

Introduction

The researchers submit that the success or failure of any criminal investigation often depends on recognising physical evidence left at a crime scene and accurately analysing the evidence found (Reilly, 2019). Therefore, Deoxyribonucleic Acid (DNA) evidence has emerged as a powerful tool to identify perpetrators of unspeakable crimes and to exonerate innocent individuals accused of similarly heinous actions. Doctor Edmond Locard, a French criminalist renowned for pioneering forensic science and criminology, believes that any action of an individual, and obviously the violent action constituting a crime, could not occur without leaving a trace (Ware, 2021). When one considers the nature of the crime of rape, it is clear that there will always be bodily contact

between the victim and potential perpetrator, and thus physical evidence will be transferred between them. In this study, slough skin cells as physical evidence in rape cases in Gauteng Province were explored. This crime is regarded as brutal and a common problem worldwide, and is no different in the South African context. Reportedly, South Africa has some of the highest incidences of rape in the world. The SAPS national crime statistics for the third quarter (from 1 October 2024 and 31 December 2024), show 11 803 rape cases were reported in South Africa; in addition, an alarming 2 300 rape incidents were recorded between 1 October 2024 and 31 December 2024 in the Gauteng Province (SAPS, 2025, p. 1).

Due to the monstrous nature of rape, the successful investigation and apprehension of the accused is a prerequisite. This can be achieved by ensuring that physical evidence at the crime scene is collected lawfully, processed professionally and preserved, and the continuity of possession is always maintained. The collection of physical evidence could determine the offender's identity and link them to the crime. However, the investigator must act meticulously at the crime scene because physical evidence is often hidden, and scientific procedures are required to find and collect such evidence (Ware, 2021). The science of investigating crimes (rape included) has evolved over the centuries. As new technologies developed in various industries, law enforcement adopted these techniques. The evolution of DNA evidence has transformed criminal investigations. Touch DNA evidence includes slough skin cells that can inform investigators about who was present at a crime scene and provide further information on the perpetrator's identity.

Similarly, slough skin cells are often left behind when an individual touches an object. This is evidence with no visible staining that would likely contain DNA resulting from the transfer of epithelial cells from the skin to an object. Because DNA testing has improved so much in sensitivity, extraction and analysis, obtaining touch DNA is now possible, and DNA profiles can be obtained from these small samples. Moreover, advances have been made in the chemical analysis of traces of skin cells left behind on objects. The literature further indicates that examining a minute amount of these epithelial cells can give the examiner crucial information (Kurn & Daly, 2023).

As initially indicated, this study explored slough skin cells as physical evidence in the investigation of rape cases in the Gauteng Province. This study included literature studies and was coupled with interviews from forensic investigators attached to the Krugersdorp LCRC under the Division: Forensic Service (DFS). Although research exists that explores physical evidence in rape cases, few of these studies focus specifically on slough skin cells as physical evidence. Past studies conducted by Dutelle (2022), Joubert (2018), Lushbaugh and Weston (2021), Turvey and Crowder (2017), Gehl and Plecas (2017) and Lochner and Zinn (2015) provided valuable insights into the general roles and functions of forensic investigators. Overall, the researchers posited the necessity of an in-depth study fully exploring slough skin cells as physical evidence in rape cases in Gauteng.

Preliminary literature review

The guideline processes followed by the South African Police Service Local Criminal Record Centre forensic investigators during rape investigations

According to Gehl and Plecas (2016), a crime investigator should have a basic awareness of criminalistics principles to manage the crime scene appropriately and recognise the significance of any evidence discovered there. The Criminal Procedure Act [CPA] (No. 51 of 1977) states that the "State may seize anything" at a crime scene and seize certain articles to obtain evidence for the institution of a prosecution (RSA, 1977). This legislation mandates that SAPS Crime Scene Technicians (CST) (forensic investigators) and SAPS CSI from the SAPS LCRC must process and collect exhibits at a crime scene. According to Omar (2008), the SAPS LCRC's duties include maintaining criminal records and using cutting-edge methods to recover physical evidence from crime scenes.

Therefore, an investigator needs a fundamental understanding of forensic science or criminalistics to understand the basic techniques for collecting and preserving physical evidence. Omar (2008) further explains that the SAPS LCRC forensic investigators are responsible for collecting evidence from a crime scene, from taking photographs to removing spent cartridges or samples of bodily fluids left at a scene. The SAPS SOP CSI 0001P states that the purpose of the standard procedure for the SAPS LCRC forensic investigator is to ensure that the crime scene is thoroughly processed and accurately documented and that the integrity of the exhibit with potential value is unquestionable (SAPS, 2019). Good management by the SAPS CST will ensure that a coordinated effort takes place and that each expert has the time to conduct a professional search, thereby increasing the chances of finding good-quality physical evidence.

The process followed by the South African Police Service Local Criminal Record Centre forensic investigators when collecting physical evidence from rape crime scenes

The SAPS LCRC must appoint a crime scene investigator following the SAPS Policy on Crime Scene Management 2 of 2005 to process the crime scene for physical evidence. They must identify, note, safeguard and analyse

potential physical evidence at a crime scene. To assess the crime scene and determine the next steps, the technician must walk through it with the investigating officer and the crime scene manager. Processing physical evidence at a crime scene continues to be the responsibility of the LCRC forensic investigator (SAPS, 2005). The SAPS LCRC Standing Operating Procedure (SOP) Crime Scene Investigation (CSI) 014 – The Collection of Physical Evidence from Crime Scenes Policy (P) – states that the crime scene examiner must do the following:

- Ensure that all crime scenes are approached as per the criteria set in this procedure in conjunction with the NI 1 of 2015 Crime Scene Management.
- Gather information to determine the scope of the scene.
- Identify the exhibits to be collected, the possible evidential value of the items and the proper collection methods.
- Mark and photograph the exhibits to be collected to document the place and position in relation to the crime scene.
- Perform all critical processing that needs to be done on the items at the scene, e.g. the collection of DNA samples.
- Document the place and position of the exhibits to be collected on a rough sketch and exhibit log.
- Collect and package the exhibits using the relevant packaging materials, e.g. sharp, dangerous items and clothing collection kits.
- Place collected exhibits in the official exhibit bags and properly seal the bags.
- Mark the seal bags with the relevant details, document the bag numbers on the exhibit log and photograph them on the scene.

The bulleted points suggest that the purpose of the SOP CSI014P is to provide available standard procedures to all SAPS LCRC forensic investigators on the collection of physical evidence at crime scenes and to ensure that the physical evidence associated with rape crimes is properly collected and documented. The principle of the procedures is that physical evidence must be properly marked, optimally collected and managed to ensure that the chain of custody is maintained. Moreover, the SAPS SOP CSI0001P – Standard Approach and Techniques of Crime Scenes – states that the crime scene examiner must do the following:

- Photograph and video the crime scenes, victims, suspects and properties.
- Sketch the crime scenes.
- Search for, collect, package and preserve physical evidence found at crime scenes.
- Detect and recover finger, foot and palm prints at the crime scene.
- Store physical evidence, prevent contamination, and forward exhibits to the SAPS FSL for analysis.
- Prepare statements and present evidence in court.
- Reconstruct the chain of events.
- Link suspects to crime scenes using fingerprints.

Taken from the bulleted points, the SAPS SOP CSI0001P clearly indicates the role of the SAPS CST in processing a rape scene effectively and methodically as outlined (SAPS, 2019). Moreover, the SOP CSI0047P – Exhibit/evidence Management, Handling and Transportation – states that evidence from the crime scene must be registered in the SAPS 459 register (SAPS, 2019c). The SAPS 459A register must be used for evidence destined for the SAPS FSL, whereas the SAPS 459B register is used for evidence destined for the CSL.

The process followed by the South African Police Service Local Criminal Record Centre Forensic Investigators when collecting touch Deoxyribonucleic Acid from rape scenes

In a rape case, Dutelle (2022:12) emphasises the significance of DNA evidence since it can create a connection between the victim, the offender and the crime site, particularly when the suspect insists they were not there. Touch DNA is simply DNA that is transferred via skin cells when an object is handled or touched by the skin surface of a human. This includes hands, skin on body surfaces, touching clothing and contact with the lips. Baxter (2015:230) also states that besides semen, other types of biological evidence are suitable for DNA analysis in cases of rape, e.g. blood (if white cells are present), hair (if the root is present), saliva, skin (if nucleated cells are present), bone, teeth, urine or faeces. Lochner and Zinn (2015:41) posit that the first step in the process of gathering physical evidence is recognising tangible clues found at a crime scene. Furthermore, the authors state that upon arrival at the crime scene, an investigator must immediately begin to look for physical evidence related to a specific crime such as rape. Equally, the SOP CSI044P – Swabbing Evidence Collection Kit (DNA) – (SAPS, 2015b) states that the crime scene examiner must do the following:

- Use the swabbing evidence collection kit and follow all instructions for collection.
- The identified area must be documented both with photography and in writing.
- Ensure the use of clean gloves, face mask and overall. These types of samples can be easily contaminated.
- Moisten the Dacron swab with sterile water by placing only two drops of water on the tip of the sterile swab.
- Swab the target area with only the tip of the swab in circular motions for at least 15 seconds.
- Place and package the swab in the dedicated swab guard box.
- Swab the target area again, this time using a dry Dacron swab. Swab in circular motions for at least 15 seconds (the dry swabbing must occur immediately after the wet swabbing to absorb the remaining water and cellular material).
- Place and package the swab in the dedicated swab guard box. Mark both swabs as being from the same origin (indicate which is "wet" and which is "dry").

Based on the bulleted points, the SOP CSI044P (SAPS, 2015b) are guidelines for the use of swabbing evidence collection kits for all SAPS LCRC, as used by forensic investigators during the investigation of rape cases.

The process followed by the South African Police Service Local Criminal Record Centre forensic investigators to prevent contamination at rape scenes

According to Gehl and Plecas (2016, p. 113), contamination is the unintended addition of material from another source to a product or piece of physical evidence. This source further defines cross-contamination as "the unintentional transfer of material between two or more physical evidence items". The first responder, the investigating officer or the SAPS CST who collects the sample all have access to touch DNA, a tiny amount of DNA that is easily contaminated. The sample must be protected against contamination by the DNA of crime scene role-players at all costs. The SAPS CST is required to achieve the following aspects in accordance with the Standard Operating Procedure CSI0061P, Use of Personal Protective Equipment (PPE) at the Crime Scene (SAPS, 2019b). The SAPS CST must wear full personal protective clothing (disposable crime scene suit, gloves, face mask and shoe protectors) and follow these guidelines:

- Gloves must be changed after handling each exhibit.
- Avoid touching the area where you believe DNA may exist.
- Avoid talking, sneezing and coughing on exhibits.
- Avoid touching your face, nose and mouth while collecting and packaging exhibits.
- Ensure that exhibits are packaged separately.
- Mark, seal and photograph all exhibits on the crime scene.
- Only the collection kit and swabbing evidence collection kit must be used, and all instructions must be followed.

The bulleted list highlights that the SOP CSI0061P provides the standard procedure for using PPE at the crime scene and outlines the procedures for wearing the required protective clothing (SAPS, 2019b). The SAPS LCRC forensic investigators should follow the set guidelines to ensure that rape scene contamination is limited or avoided at all costs while conducting their investigations properly.

The process followed by the South African Police Service Local Criminal Record Centre Forensic Investigators to maintain the chain of custody on rape cases

The identification and ongoing preservation of objective evidence from when it is discovered until it is offered as evidence in court constitutes the chain of custody or "continuity of possession" (Kumar, 2023, p. 44). Chain of custody is the list of all individuals who have had an item of evidence in their possession at any one time (Badiye et al., 2023). According to Dutelle (2022), the chain of custody of evidence refers to the evidence that is gathered throughout an inquiry and provided to the court for evidentiary purposes. This author further points out that the "chain" shows who had contact with the evidence, at what time, under what circumstances, and what changes, if any, were made to the evidence. Furthermore, Mozayani and Fisher (2018, p. 9) stress that the "chain of custody or chain of evidence" is critical knowledge that every detective should have. The court will need proof that the evidence collected during an investigation and the evidence finally submitted has been maintained, and a chain of custody must be proved. This chain confirms who had contact with the evidence, at what time, under what conditions, and what changes, if any, were made to the evidence. Van der Watt (2014) sees this concept as the fundamental principle in investigating crime because, according to him, it is intertwined with just about every phase of the investigation process. The researchers believe that the chain of custody is vital because it represents the history of a piece of evidence.

Methods and materials

This qualitative study was explorative and descriptive in nature, adopting a phenomenological research design with a qualitative research approach. Creswell and Creswell (2018) suggest that to study an existing research problem, a qualitative research approach can be used to inquire about the natural setting comprising human subjects and places that inform the collection of data. Therefore, this study employed a phenomenological research design, as it enabled the researchers to obtain information directly from participants who had first-hand experience in the investigation of rape cases. Leedy and Ormrod (2019) highlight that this research design attempts to understand people's perceptions, perspectives, and views of a particular situation.

The research's sample size and procedure comprise SAPS LCRC forensic investigators (SAPS LCRC FI). Overall, the population of this study consisted of 20 participants. Their perspectives were sought on slough skin cells as physical evidence and rape cases. Purposive sampling was used to select the participants. The criterion for sample selection was based on the number of SAPS LCRC members' years of service and expert status, which translates to experience and knowledge on the subject matter. The selected participants comprised both male and female participants, ranging from commissioned to non-commissioned police officers. All communications were in English, and a voice recorder was used to record the interviews, which was agreed to by all participants. The data collection procedure included literature studies and interviews. This was guided by an interview schedule guide aimed at ascertaining SAPS LCRC forensic investigators' viewpoints on the subject under investigation. Before drafting this study, ethical approval was obtained from the principal of the University of South Africa and the SAPS as the gatekeeper. To ensure trust, reliability and quality of the study result, the four tenets of trustworthiness (credibility, conformability, dependability and transferability) were upheld.

Flick (2018) defines data analysis as the process of bringing order, structure, and meaning to the mass of collected data. The researchers followed the following four steps of data analysis, namely: 1) collecting, 2) categorising, 3) perusing, and 4) summarising as described by Leedy and Ormond (2019). The inductive thematic content analysis was adopted to explore the responses of the participants from Krugersdorp SAPS LCRC in addressing the study objective. ATLAS.ti version 23 is a sophisticated computer-assisted qualitative data analysis software that facilitates the analysis of qualitative data, the ATLAS.ti v23 was used for the analysis. The researchers followed the following four steps of data analysis, namely: 1) collecting, 2) categorising, 3) perusing, and 4) summarising as described by Leedy and Ormond (2019), as presented overleaf:

- Step 1: First, the researchers collected data and read through all the interview transcripts.
- Step 2: The researchers used the sophisticated computer-assisted qualitative data analysis software ATLAS.ti v23 to transcribe the recorded semi-structured interviews, analyse and categorise the interview data into themes and sub-themes.
- Step 3: The researchers read through the completed interview schedules individually, comparing the participants' answers with each other and the topic under discussion. The opinions of each interviewed SAPS LCRC forensic investigator regarding exploring slough skin cells as physical evidence in rape cases was recorded.
- Step 4: The researchers integrated and summarised all the data collected and compared the data with the various literature sources. The outcome of the data analysis enabled the researcher to make findings and recommendations regarding the research question. Some of the findings are presented in this article.

Findings and discussions

In this study, the focus was on findings from data collected through semi-structured face-to-face interviews with the 20 purposively selected participants from the SAPS LCRC in Krugersdorp, Gauteng Province. To uphold significant ethical considerations, namely, privacy, anonymity and confidentiality, participants' names and genders are not provided; instead, the participants are numbered from P1-P20. These findings are arranged in terms of the one question posed to the participants. What was shared by the participants with the researchers is indicated in verbatim and discussed. The purpose of the data gathered was to provide answers to the following question, mapped together with the objective of this study, while revealing the identified study theme.

- *Do the SAPS LCRC forensic investigators adhere to the SAPS guidelines when investigating rape cases in Gauteng Province? (Research question)*
- *To describe the processes followed by the SAPS LCRC forensic investigations during rape investigations in accordance with the SAPS guidelines in Gauteng Province (the mapped study objective)*

The objective of the study was designed as follows: To describe the processes followed by the SAPS LCRC forensic investigations during rape investigations in accordance with the SAPS guidelines in Gauteng Province. To achieve this objective the first research question was posed to the participants: *Do the SAPS LCRC forensic investigators adhere to the SAPS guidelines while investigating rape cases in Gauteng Province?* This question was asked to establish whether the SAPS guidelines while investigating rape cases in Gauteng Province was followed

in order to determine compliance for effective investigations. Some of the verbatim responses from the targeted participants are recorded as follows:

***Participants 1, 4, 11,12,14,16 and 19**: Yes.*
***Participants 2 and 9:** Yes, we do because we have the SAPS SOP that guides us.*
***Participant 3:** Yes, as far as I know.*
***Participants 5 and 6:** Yes, they do according to the standard operating procedures.*
***Participant 7:** I would believe so.*
***Participant 8:** Yes, for sure, if it's a priority crime, you would be stupid if you don't.*
***Participant 10:** I will say yes.*
***Participant 13:** Yes, I think they do.*
***Participant 15:** Definitely yes.*
***Participant 17:** Yes, we do our best to adhere to the SAPS guidelines.*
***Participant 18:** Yes, I believe we do, that is why we have different specialised units and we work hand in hand.*
***Participant 20:** Yes, I would assume they do.*

The expressed views by the selected participants align with the SAPS NI 1 of 2015 on Crime Scene Management and the SAPS SOP CSI0001P on the Role of the SAPS CST. Moreover, the responses agree with Jackson and Jackson (2008) and Gehl and Plecas (2016), who indicate that a crime investigator should have a basic awareness of criminalistic principles to manage the crime scene appropriately and recognise the significance of any evidence discovered there. The Criminal Procedure Act [CPA] (No. 51 of 1977) states that the "State may seize anything" at a crime scene and seize certain articles to obtain evidence for the institution of a prosecution (RSA, 1977). This legislation mandates that SAPS CST (Forensic Investigators) and SAPS CSI from the SAPS LCRC must process and collect exhibits at a crime scene. According to Omar (2008), the SAPS LCRC's duties include maintaining criminal records and using cutting-edge methods to recover physical evidence from crime scenes. Therefore, an investigator needs a fundamental understanding of forensic science or criminalistics to understand the basic techniques for collecting and preserving physical evidence. The expressed views by the selected participants align with Omar (2008), who further explains that the SAPS LCRC forensic investigators are responsible for collecting evidence from a crime scene. The expressed views by the selected participants align with the SAPS SOP CSI 0001P that states that the purpose of the standard procedure for the SAPS LCRC forensic investigator is to ensure that the crime scene is thoroughly processed and accurately documented and that the integrity of the exhibit with potential value is unquestionable (SAPS, 2019). Good management by the SAPS CST will ensure that a coordinated effort takes place and that each expert has the time to conduct a professional search, thereby increasing the chances of finding good-quality physical evidence. The identified study theme that emerged from the study objective was compliance with the South African Police Service guidelines.

Theme 1: Compliance with South African Police Service guidelines

According to Participant 2, *"Yes, we do that because we have Standard Operating Procedure guidelines".* Participant 2 emphasised the Standing Operating Procedures in his organisation, suggesting that these protocols facilitate compliance with SAPS principles. Similar to Participant 2, Participant 5 confirmed compliance with SAPS principles using standard operating procedures. Participant 5 stated, *"Yes, they followed standard operating procedures".* Participant 8's response emphasised the importance of following SAPS guidelines, particularly in priority crime cases, and using strong language, highlighting the importance of compliance. Participant 17 said, *"Yes, we do our best to follow SAPS guidelines".* Participant 17 noted the efforts made to comply with SAPS principles, demanding a commitment to compliance within the organisation. Participant 18 also mentioned that "*Yes, I think so, that's why we have different specialised units and we work together".* Participant 18 suggested that the presence of specialised units in the organisation reflects a commitment to SAPS principles. The mention of collaboration further emphasises the importance of specialised units, namely, the SAPS LCRC.

The expressed views by the selected participants align with the SAPS NI 1 of 2015 on Crime Scene Management and the SAPS SOP CSI0001P on the Role of the SAPS CST. Omar (2008) explains that the SAPS LCRC forensic investigators are responsible for collecting evidence from a crime scene. The expressed views by the selected participants align with the SAPS SOP CSI 0001P that states that the purpose of the standard procedure for the SAPS LCRC forensic investigator is to ensure that the crime scene is thoroughly processed and accurately documented and that the integrity of the exhibit with potential value is unquestionable (SAPS, 2019). Lochner and Zinn (2015) posit that the first step in gathering physical evidence is recognising tangible clues found at a crime

scene. Furthermore, the authors state that upon arrival at the crime scene, an investigator must immediately begin to look for physical evidence related to a specific crime such as rape.

The expressed views by the selected participants are in line with SOP CSI014P that provides available standard procedures to all SAPS LCRC forensic investigators on the collection of physical evidence at crime scenes and to ensure that the physical evidence associated with rape crimes is properly collected and documented. The expressed views by the selected participants align with SOP CSI044P, which is gives guidelines for the use of swabbing evidence collection kits for all SAPS LCRC, during the investigation of rape cases. The expressed views by the selected participants align with SOP CSI0061P, which provides the standard procedure for using PPE at the crime scene and outlines the procedures for wearing the required protective clothing (SAPS, 2019b). The SAPS LCRC forensic investigators should follow the set guidelines to ensure that rape scene contamination is limited or avoided at all costs while conducting their investigations properly.

Conclusion and recommendations

The research design and methodology engaged in this study were deemed relevant as the study objective was achieved. The qualitative research approach, supported by the application of the phenomenological research design, methods of data collection and analysis, all contributed to the successful findings of the study. The researchers used semi-structured one-on-one interviews to gather data. The use of semi-structured interviews ensured that the participants were able to articulate their lived experiences relating to the objective of exploring slough skin cells as physical evidence in rape cases in the Gauteng Province. The use of open coding using ATLAS.ti v23 software was used to analyse data. Key strategies such as constant comparative analysis and coding were used in this study to identify and integrate the study theme and enhance the design development. The SAPS LCRC Krugersdorp forensic investigators further substantiated this.

The findings of this study revealed that Krugersdorp SAPS LCRC forensic investigators adhere to and comply with the SAPS guidelines while investigating rape cases in GP. The focus was on the experiences of SAPS LCRC Krugersdorp forensic investigators as it is their responsibility to forensically investigating rape crime scenes in terms of the SAPS LCRC Crime Scene Policy (2005) and SAPS NI of 2015 on Crime Scene Management. This study highlighted the importance of complying and adhering to the set guidelines when investigating rape cases for slough skin cells as physical evidence.

Recommendations based on the objective of this study and the identified study theme

Study objective: To Describe the Processes Followed by the Local Criminal Record Centre Forensic Investigations During Rape Investigations in Accordance with the South African Police Service Guidelines in Gauteng Province

Theme 1: Compliance with South African Police Service guidelines

The recommendations were made based on the emerging theme focusing on the objective of this study, considering the literature discussed and the data obtained from the participants during the interviews. It was established from this study that Krugersdorp SAPS LCRC forensic investigators do adhere to the guidelines on how to investigate rape cases that are guided by the SAPS NI 1 of 2015 on Crime Scene Management. Compliance with these guidelines is imperative. All SAPS LCRC forensic investigations are expected to adhere to and comply with the set guidelines.

- It is therefore recommended that non-compliance with the SAPS guidelines of NI 1 of 2015 on Crime Scene Management must be dealt with according to the SAPS Disciplinary Regulations 1 of 2016.
- Furthermore, it is highly recommended that the SAPS LCRC CSI policies be reviewed and updated quarterly to keep up with new technology.
- In addition, it is recommended that the SAPS review and upgrade SAPS LCRC training course materials and manuals and incorporate slough skin cells as physical evidence.

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