

**FORENSIC EVIDENCE AND ITS INFLUENCE IN SEXUAL VIOLENCE OFFENCES IN NIGERIA;
CHALLENGES AND PROSPECT**

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CERTIFICATION

I, Miracle EMMAMUYOVWI, with matriculation number LAW2002860, hereby certify that, with the exception of references to the works and opinions of other writers duly acknowledged herein, this entire project is a product of my personal research and findings. It has, neither in whole nor in part, been presented for another degree elsewhere.

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APPROVAL

We certify that this project work was researched, written, and completed by Miracle EMMAMUYOVWI, with matriculation number LAW2002860 in partial fulfillment of the requirements for award of the degree of bachelor of laws (LLB) of the University of Benin.

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Table Of Cases

Abdanalysullahi v State (2015) LPELR-25928 (CA)
Adeleke v State (1987) NWLR (Pt 56) 244
Alabi v State (1993) 7 NWLR (Pt 307) 511 CA
Amodu Tijani v Secretary Southern Nigeria (1921) 2 AC 399
Anifowoshe v Wosilat (2018) LPELR-44441 (CA)
Benjamin v State (2018) LPELR-44346 (CA)
Eshugbayi Eleko v Government of Nigeria (1931) AC 662
Eze v The State (1976) 1 SC 93
FRN v Fani-Kayode (2021) 1 NWLR (Pt 1758) 456 CA
FRN v Ibori (2014) LPELR-22731 (CA)
FRN v Osahin (2014) LPELR-22731 (CA)
Gbadamosi v Kabo Travel Ltd (2000) 10 NWLR (Pt 674) 83 SC
Igho v State (1978) 3 SC 87
Iko v The State (2001) 14 NWLR (Pt 732) 221 SC
Kubor v Dickson (2013) 4 NWLR (Pt 1345) 534
Mukesh v State (1996) 2 SCC 384
Nwosu v The State (1984) 5 NCLR 508 CA
Oche v State (2007) 5 NWLR (Pt 1027) 224 CA
Oforlete v State (2000) 12 NWLR (Pt 681) 415
Ogundipe v State (2018) LPELR-46777 (CA)
Ojo v FRN 11 NWLR (Pt 1099) 467
Okoro v The State (1988) 5 NWLR (Pt 94) 255 SC
Olayinka v State (2007) 9 NWLR (Pt 1040) 561 (SC)
Osayi v State (1998) 8 NWLE (Pt 561) 296
Osayi v State (2019) LPELR-48843 (CA)
Posu & Anor v The State (2018) 1 NWLR (Pt 1601) 401 SC
R v Doheny & Adams (1997) 1 Cr App R 369
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State v Aigboje (2019) LPELR-48179 (CA)
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State v Oluwu (2012) LPELR-20093 (CA)

ABSTRACT

Sexual violence is an extensive and deeply distressing crime that poses significant challenges to the criminal justice systems globally, particularly in Nigeria, and this is often committed in private, without witnesses, and under conditions where victims face social stigmatization and psychological trauma which could range from post traumatic stress disorder (PTSD) and other traumatic related issues, such crimes are infamously difficult to investigate and prosecute, It remains a pervasive and deeply rooted issue in Nigeria, cutting across social, economic and cultural boundaries, This study explores the prevalence , causes and consequences of sexual violence crimes in the country, examining both the systemic failures and cultural attitudes that enables it's persistence, it examines the application of forensic evidence as an essential tool in detecting and prosecuting sexual violence crimes, focusing on how scientific methods can improve the effectiveness and credibility of investigations and legal proceedings worldwide, with particular focus on Nigeria, with the primary aim to explore how forensic techniques such as DNA analysis, toxicology, fingerprint, forensic pathology, crime scene reconstruction, and expert testimony and other forensic techniques can assist law enforcement agencies and the judiciary in obtaining objective and more accurate evidence in sexual offence cases. Furthermore, this study seeks to identify the forensic methods most relevant to such crimes, assess the challenges inhibiting their effective application in Nigeria, and propose legal and institutional reforms to enhance their uses.

CHAPTER ONE

1.1 BACKGROUND OF STUDY

The scourge of sexual violence has become a pressing concern for the Nigerian legal system, not only due to its prevalence but also due to the evidentiary burden it places on victims and prosecutors. These crimes often occur in isolated environments, devoid of witnesses, making prosecution heavily reliant on the credibility of victim testimony, an approach that is vulnerable to bias, societal stigma, and legal technicalities. This has contributed to the collapse of numerous sexual violence cases in the Nigeria courts. In this context, forensic science emerges as an indispensable tool in bridging the evidentiary gap by offering objective, scientific methods of investigation and proof.

This sets the foundation for this study by examining the relevance of forensic science to the prosecution of sexual violence crimes. The background of the study recognizes that traditional investigation techniques are insufficient in cases of sexual assault, where tangible evidence is often limited or overlooked. The application of forensic methods such as DNA profiling, serological analysis, toxicology, and crime scene investigation can provide the physical proof necessary to corroborate testimonies and identify perpetrators beyond reasonable doubt. The Nigerian legal framework has made strides in acknowledging sexual violence through legislation like the Violence Against Persons (Prohibition) Act 2015, but the integration of indepth forensic provisions into practice remains limited and inconsistent.

The problem statement is therefore rooted in the disconnect between the potential of forensic evidence and its practical application within Nigeria's justice system. Despite legal provisions, many cases collapse in court due to poor evidence handling, lack of expert analysis, and procedural gaps. The question arises: How can the Nigerian legal system optimize the use of forensic science to ensure justice for survivors of sexual violence?

Traditional investigative methods have proven inadequate in sexual violence cases where physical evidence is often limited or poorly preserved. Forensic techniques such as DNA profiling,

toxicology, fingerprint analysis, and crime scene reconstruction have revolutionized criminal investigations worldwide by offering verifiable evidence that corroborates testimony and establishes guilt beyond reasonable doubt. Although Nigerian legislation, including the Evidence Act 2011 and the Violence Against Persons (Prohibition) Act 2015, has acknowledged the importance of evidence-based prosecution, the integration of forensic science into investigative and prosecutorial processes remains inconsistent and underdeveloped.

This disconnect between the theoretical promise of forensic evidence and its practical application forms the basis of this research. Many cases fail due to inadequate forensic infrastructure, lack of trained experts, contamination of crime scenes, poor chain of custody, and limited judicial appreciation of scientific evidence. These challenges raise fundamental questions: What role can forensic evidence play in detecting and prosecuting sexual violence crimes in Nigeria? What obstacles hinder its effective application? And what reforms are necessary to strengthen its use within the justice system?

The aim of this research is to examine the influence of forensic evidence on criminal trials in Nigeria, with a particular focus on sexual violence offences. Its objectives are to assess the contribution of forensic science to investigations and prosecutions, identify challenges limiting its effectiveness, and propose practical legal and institutional reforms to enhance its application. This study is significant as it addresses critical gaps in Nigeria's criminal justice system and advocates for a more evidence-driven approach that supports victims while upholding the principles of fairness and due process. The findings will benefit legal practitioners, judges, law enforcement agencies, forensic experts, and policymakers committed to justice reform.

The research is limited to the Nigerian context, focusing on sexual violence crimes such as rape, defilement, and indecent assault. While comparative references to jurisdictions with advanced forensic frameworks will be made, the primary emphasis remains on Nigeria's legal and institutional setting. The methodology adopted is doctrinal and qualitative, involving a critical analysis of statutes

such as the Evidence Act 2011 and VAPP Act 2015, judicial decisions, scholarly literature, and international instruments like CEDAW, CAT, and the Rome Statute. A comparative perspective is also employed to draw insights from best practices globally.

The problem statement is therefore rooted in the disconnect between the potential of forensic evidence and its practical application within Nigeria's justice system. Despite legal provisions, many cases collapse in court due to poor evidence handling, lack of expert analysis and procedural gaps. The question arises: How can the Nigerian legal system optimize the use of forensic science to ensure justice for survivors of sexual violence. To address this, the study poses key research questions, including: What role can forensic evidence play in detecting and prosecuting sexual violence crimes? What are the prevailing challenges in the use of forensic methods in Nigeria? What reforms are needed to strengthen the evidentiary process in such cases?

This work is organized into five chapters, The first chapter is the introductory section that focuses on the background of the study, the research questions, objectives, significance, methodology, and scope of study as well as the methodology of the study.

Chapter Two examines the historical perspective of forensic evidence in Nigeria, providing types of forensic evidence which includes DNA, toxicological and ballistics etc, it examines the application of forensic evidence in sexual violence cases and reviews judicial analysis for the prosecution of sexual violence crimes in Nigeria by discussing the principles and applications of forensic science in sexual violence cases, including the types of evidence and their probative value. Chapter Three addresses the challenges undermining the effective use of forensic evidence, such as contamination, chain of custody issues, expert testimony and interpretation of evidence, infrastructural deficiencies as well as limitations of forensic evidence in sexual violence cases. Chapter Four presents analysis and findings, focusing on the effectiveness of forensic evidence in securing convictions and its impact on judicial outcomes. Chapter Five concludes the study with recommendations for improving

forensic practices and ensuring a justice system that is scientific, credible, and responsive to the needs of sexual violence survivors.

By situating the study at the intersection of law and science, this research aims to provide practical solutions that strengthen the probative value of forensic evidence in Nigerian courts, enhance prosecutorial success, and promote justice for victims of sexual violence.

1.2 STATEMENT OF RESEARCH PROBLEM

Forensic investigation has emerged as a crucial tool in detecting crimes and identifying perpetrators, particularly in cases of sexual violence. Despite its potential, forensic investigation faces several challenges that compromise its accuracy and reliability. These challenges include contamination and loss of continuity at crime scenes, human errors and bias, inadequate training of forensic experts, and inconsistencies in quality and standard of forensic analysis. Furthermore, the pressure on prosecution to lead evidence against the accused can lead to insufficient validation of results and misleading testimonies.

1.3 RESEARCH QUESTIONS

1. What role can forensic evidence play in the aid of detecting and prosecuting sexual violence crimes?
2. What are the prevailing challenges in the use of forensic methods in Nigeria
3. What reforms are needed to strengthen the evidentiary process in such cases

1.4 AIM AND OBJECTIVES

The aim of this research is to examine the influence of forensic evidence on Nigerian criminal trials, with a focus on the challenges of implementation, and its impact on the justice system, particularly in case of sexual violence. This study aims to contribute to a deeper understanding of the complex relationship between forensic evidence, law and the justice system in Nigeria, and strategies for enhancing the use of forensic evidence in criminal trials, particularly in relation to sexual violence cases.

The objectives of this study is to undertake a comprehensive examination of the role of forensic evidence in the prosecution of sexual offences in Nigeria.

- (1) Specifically, this study seeks to investigate the ways in which forensic evidence can be utilized to build stronger cases against perpetrators of sexual violence, while also protecting the rights and dignity of victims.
- (2) Analyzing the challenges and limitations of forensic evidence in sexual offence cases, this study aims to identify opportunities for improvement and inform law and policy reforms that enhance the effective use of forensic evidence in the Nigerian justice system.
- (3) This study seeks to contribute to the development of more effective strategies for investigating and prosecuting sexual offences, and for supporting victims of sexual violence in Nigeria, it is pertinent to state that this study are in threefolds: firstly, to examine the contribution of forensic evidence to sexual violence investigations; secondly, to identify the challenges hampering its effective use; and thirdly, to propose solutions that enhance the integrity of forensic processes and support the delivery of justice. This study explores the application of forensic science in detecting and prosecuting sexual violence crimes. The aim is to investigate how forensic methods, such as DNA analysis, crime scene investigation, and expert testimony, can aid in the effective prosecution of offenders. The objectives are to examine the role of forensic evidence in sexual violence cases, identify challenges in its application, and propose recommendations for improvement.

1.5 RESEARCH METHODOLOGY

Employing the doctrinal research methodology, this study examines the role of forensic evidence in Nigerian criminal trials and the challenges of implementation through a critical analysis of relevant statutes, case law, and scholarly literature.

The doctrinal approach allows for an in-depth examination of the legal framework governing forensic evidence in Nigeria, including the Evidence Act 2011 , the criminal code, Violence against

persons(Prohibition) Act 2015, judicial precedents and other international human rights instruments such as the convention of the elimination of all forms of discrimination against women(CEDAW), the Convention Against Torture and other cruel, inhuman, or degrading treatment or punishment (CAT), and the Rome Statute of the International Criminal Court, which defines sexual violence as a crime against humanity and a war crime, and other relevant statutes. This analysis reveals the legal principles and rules that govern the admissibility and use of forensic evidence in Nigerian courts.

The qualitative research methodology complements the doctrinal approach by providing a nuanced understanding of the practical challenges and complexities surrounding the use of forensic evidence in Nigerian criminal trials through a critical analysis of case law and scholarly literature.

1.6 SCOPE OF STUDY

This study focuses on Nigeria as its geographical scope, with a comparative perspective highlighting the differences in forensic investigation practices between Nigeria and European jurisdictions. The content scope encompasses a review of relevant law books, articles, and journals on forensic investigation, as well as an analysis of Nigerian case law and statutes. This will provide insight into the utility of forensic evidence in Nigeria's justice system and the challenges it faces.

1.7 CONTRIBUTION TO KNOWLEDGE

The intersection of forensic science as well as the admittance of evidence generated from forensics and the administration of criminal justice in Nigeria is an area that remains relatively underexplored in academic and legal discourse. This research, titled “Forensic Evidence and Its Influence on Nigerian Criminal Trials: Challenges of Implementation,” provides a significant contribution to knowledge by critically examining the extent to which forensic evidence is utilized, recognized, and given probative value in Nigerian courts. It also interrogates the systemic and institutional challenges that undermine its effectiveness. The study offers a fresh perspective, filling noticeable gaps in both academic literature and practical legal processes within Nigeria’s criminal justice system.

One of the core contributions of this work lies in its contextual focus. While forensic science has gained global recognition as an indispensable tool in crime investigation and prosecution, its integration into the Nigerian legal system remains sporadic and inconsistent. This study provides a Nigeria-specific analysis, identifying how cultural, infrastructural, legal, and procedural factors affect the implementation and admissibility of forensic evidence. By analyzing domestic statutes such as the Evidence Act 2011, the Criminal Procedure Act, and relevant case law, the research presents a doctrinal insight into how forensic evidence is treated within Nigerian jurisprudence. This work goes further to examine comparative jurisdictions, thereby offering recommendations rooted in both international best practices and local realities.

1.8 TABLE OF CONTENTS

CHAPTER ONE: INTRODUCTION

- 1.1 Background: Sexual Violence Crimes and the Importance of Forensic Evidence
- 1.2 Problem Statement: Challenges in Prosecuting Sexual Violence Crimes
- 1.3 Research Questions: How can Forensic Science Aid in Detecting and Prosecuting Sexual Violence Crimes?
- 1.4 Objectives: Examine the Role of Forensic Evidence, Identify Challenges, and Propose Recommendations
- 1.5 Methodology: Doctrinal Research Methodology
- 1.6 Scope of Study
- 1.7 Contribution to Knowledge

CHAPTER TWO: FORENSIC SCIENCE IN SEXUAL VIOLENCE CRIMES

- 2.1 Historical Perspective of Forensic Evidence in Nigeria
- 2.2 Types of Forensic Evidence: DNA, Fingerprints, Crime Scene Analysis, Biological Evidence, Toxicological, Odontological Evidence etc
- 2.3 Application of Forensic Evidence in Sexual Violence Cases
- 2.4 Case Law Analysis: Successful Use of Forensic Evidence in Sexual Violence Prosecutions

CHAPTER THREE: APPLICATION OF FORENSIC EVIDENCE IN SEXUAL VIOLENCE

CASES IN NIGERIA

- 3.1 DNA application in the Nigeria legal system
- 3.2 DNA profiling and genetic identification in sexual violence cases
- 3.3 Medical examination and toxicological analysis in proving sexual violence cases
- 3.4 Crime scene analysis and chain of custody principle
- 3:5. Trace and circumstantial forensic evidence in corroborating testimonies

CHAPTER FOUR: CHALLENGES AND PROSPECTS OF FORENSIC EVIDENCE IN SEXUAL VIOLENCE CASES IN NIGERIA

- 4.1 Evidentiary and procedural challenges in the admissibility of forensic evidence
- 4.2 Institutional and infrastructural constraint in forensic evidence
- 4.3 Socio-cultural barriers and victim related challenges
- 4:4. Prospects to reform: Legislative, judicial and technological development

CHAPTER FIVE

Recommendations & Conclusion.

CHAPTER TWO

FORENSIC SCIENCE IN SEXUAL VIOLENCE CRIMES

Forensic evidence is the use of scientific principles, methods, and techniques to investigate crimes and examine evidence for both criminal and civil legal proceedings¹. Sexual violence on the other hand involves act of a sexual nature which is carried out against one or more persons or caused such person or persons to engage in an act of a sexual nature by force, or by threat of force or coercion"². This essay also adopts the definition proposed by the IASC guidelines.³

Forensic science plays an important role in sexual violence crimes by collecting and examining physical evidence from crime scenes, victims, and suspects to connect perpetrators to victims. Presently, techniques like DNA profiling, toxicology, and semen identification proofs or rejects a suspects involvement and the nature of the sexual acts that occurred. The right evidence collection, preservation, and storage following designated procedures are very important for ensuring the evidence is admissible in court and leads to successful prosecution of offenders.

HISTORICAL PERSPECTIVE OF FORENSIC EVIDENCE IN NIGERIA

In Nigeria, the historical development of forensic evidence entails the switch from traditional forms of crimes investigations and acquisition of justice to the modern legal systems that is influenced by the colonial rule and then the subsequent adoption of scientific methods in criminal investigations. The historical perspective is very important as it shows the extent of Nigeria acceptance to forensic evidence and the challenges it faces.

Its development in Nigeria evolved gradually , from its traditional method of proof to modern scientific techniques like fingerprints, ballistics, DNA analysis.

The history of forensic evidence in Nigeria can be divided into four major periods:

a) Pre colonial

¹ US Legal Forms, 'Forensic Evidence: Understanding Its Legal Definition' (n.d.) <https://legal-resources.uslegalforms.com/f/forensic-evidence>, accessed 11 November 2025

² Anne-Marie de Brouwer et al (eds), *Sexual Violence as an International Crime: Interdisciplinary Approaches* (Intersentia 2013) 42.

³ IASC guidelines for Gender-based Violence Interventions in Humanitarian Settings: Focusing on Prevention of and Response to Sexual Violence in Emergencies (IASC 2005) <https://www.humanitarianinfo.org/iasc/content/products/N> (accessed 11 November 2025).

- b) Colonial
- c) Post-colonial
- d) Modern and contemporary period

2.1 Pre-colonial Era

Prior to the British colonization, Nigerian communities predominantly depended on traditional and customary justice systems and investigations into crimes were carried out through methods such as oath taking, trials by ordeal, and testimonies from community witnesses. There was an absence of scientific procedures; rather, spiritual and social beliefs directed the investigative processes. These practices primarily aimed to uphold peace and restore order, rather than to collect tangible evidence. In pre-colonial societies such as the Igbo segmentary societies, evidence gathering was not a scientific process but was deeply intertwined with social norms and spiritual beliefs, often involving community input and the decisions of elders or priests⁴.

The foundations of these systems were deeply embedded in the customs, religious beliefs, and moral values of each community, with justice primarily focused on preserving peace, truth, and social equilibrium, rather than on scientifically punishing offenders.

These traditional systems also emphasized deterrence and moral restoration rather than mere punishment. Once wrongdoing was established, remedies were tailored toward restoring harmony between the offender, the victim, and the community. This restorative approach to justice was seen as necessary to preserve communal coexistence. Even though these processes lacked the precision of modern forensic science, they represented a societal attempt to use available knowledge to establish facts and deliver outcomes that could be described as fair. In essence, the pre-colonial justice methods embodied the earliest Nigerian efforts at connecting evidence to guilt, demonstrating that while the science of forensics was yet unknown, the philosophy behind evidence based adjudication was already in practice. Some of the prominent features and methods included:

⁴ Victor Obinna Chukwuma, 'A Legal Analysis of the Pre-Colonial Igbo Peoples' Perspective to Criminal Justice' (2023) 6(1) *AB Journals: African Journal of Arts, Culture and History Research* 1, 4.

(a) Trial by Ordeal

Trial by ordeal represented one of the earliest and most recognized methods for ascertaining guilt or innocence in traditional societies. This process involved subjecting the accused to a physical or spiritual test, based on the belief that divine forces would safeguard the innocent while punishing the guilty⁵. This practice was commonly utilized to determine guilt in cases of uncertainty. The accused might be required to consume a specific concoction, handle a heated object, or immerse a hand in boiling oil. It was believed that deities or ancestors would shield an innocent individual from harm.

For instance, in Yoruba culture, *Sasswood* (or ordeal poison) was occasionally employed in serious allegations such as murder or witchcraft. Among the Igbo, individuals might invoke a deity like *Amadioha* or *Ala*, appealing to the god to punish anyone who was deceitful. Although this method lacked a scientific foundation, it was socially accepted and regarded as effective during that period. As earlier stated among the Yoruba, the *Sasswood* ordeal necessitated that the suspect consume a mixture derived from the *Erythrophleum suaveolens* tree; survival was interpreted as evidence of innocence, whereas death or illness was regarded as an indication of guilt⁶. Comparable practices were observed among the Igbo and Edo communities, where accused individuals were compelled to swear before formidable deities such as *Amadioha* or *Ala* to prove their innocence. Although these customs lacked scientific substantiation, they were embraced due to the populace's profound belief that the gods would not permit the innocent to endure unjust suffering. Scholars such as Nwabueze argue that this type of trial, despite its severity, functioned as an early mechanism for upholding communal order and discouraging deceit.⁷

From a contemporary legal standpoint, this method fundamentally contravenes the principle of natural justice, particularly the presumption of innocence and the entitlement to a fair hearing as articulated in Section 36(5) of the 1999 Constitution of the Federal Republic of Nigeria (as amended)⁸. Additionally, it

5Legalpedia, 'CRIME AND PUNISHMENT IN AFRICAN INDIGENOUS LAW' (n.d.) <https://legalpediaonline.com/african-indigenous-law/> (accessed 11 November 2025).

6 Idahosa Osagie Ojo and Eghosa O. Ekhaton, 'PRE-COLONIAL LEGAL SYSTEM IN AFRICA: AN ASSESSMENT OF INDIGENOUS LAWS OF BENIN KINGDOM BEFORE 1897' (2021) 1(1) *University of Derby Repository* 1, 15

7 Nwabueze OI, 'The "Trial by Ordeal" in the Traditional Igbo Society: A Historical Perspective' (2018) Nsukka *Journal of History and International Studies*

8 s36(5) of the Constitution of the Federal Republic of Nigeria 1999 (as amended)

violates the stipulation that guilt must be proven beyond a reasonable doubt as mandated by Section 135 of the Evidence Act 2011. The ordeal was neither logical nor founded on verifiable evidence, and thus, it could not satisfy the modern standards of reliability or admissibility in evidence.⁹

Nevertheless, the ordeal functioned as a form of social deterrence in pre-colonial societies, where the belief in divine retribution was deeply ingrained. It has been posited that such ordeals embodied "a moral faith in divine justice rather than empirical proof." Elias noted that while these ordeals lacked procedural fairness, they played a crucial stabilizing role in communities where formal state mechanisms were nonexistent.¹⁰

(b) Oath-Taking and Swearing Before Deities

Oath taking served as a known method for ascertaining the truth. In the uprise of disagreement between two parties, they could swear an oath at a shrine or with a sacred object to demonstrate their innocence or to prove guilt. It was believed that anyone who perjured themselves under such an oath would face misfortune or death.

This system was effective due to the strong faith individuals had in their traditional deities and their fear of spiritual repercussions. It however operated as a mechanism whereby the accused, the complainant, or witnesses would swear before gods, ancestors, or sacred objects to validate the truth. The Yoruba frequently called upon Ogun, the god of iron, while the Igbo turned to the earth goddess Ala. In Northern Nigeria, where Islamic jurisprudence had an influence, oath-taking was acknowledged under Sharia law as a valid evidentiary process known as Yamin, wherein oaths were taken to affirm statements when evidence was lacking¹¹.

From a legal perspective, oath-taking can be likened to Section 205 of the Evidence Act 2011, which permits witnesses in Nigerian courts to take oaths prior to providing testimony¹². However, in contrast to the statutory oath system that assumes divine accountability as a moral safeguard, pre colonial oath-taking

⁹ Evidence Act 2011, s 135.

¹⁰ T.O Elias *The Nature of Nigeria Customary Law*(1956)

¹¹ Shari'ah Criminal Procedure Code Law, s 195 (Jigawa State)

¹² s205 of the Evidence Act 2011 (as amended)2023

was seen as direct evidence of truth itself, rather than merely a moral duty and this created a blurred line between belief and proof. In *Amodu Tijani v. Secretary Southern Nigeria*, the Privy Council acknowledged that customary law could exist alongside English law as long as it did not contradict natural justice. Although trial by oath was socially functional, it would today be considered repugnant for undermining rational judicial inquiry.¹³

(c) Elders' inquiry and community adjudication

This involves the investigative actions taken by esteemed members of the community such as chiefs, elders, or heads of families on conflicts or alleged offenses. The emphasis here is on collective wisdom, customary practices, and oral testimonies, rather than on documented evidence. Conclusion were reached through meticulous questioning, observation of behavior, and evaluation of credibility based on reputation and standing within the community¹⁴. Elders drew upon their extensive understanding of local customs, historical context, and kinship relationships to ascertain the truth and restore harmony¹⁵.

In the context of community adjudication, the focus extended to the involvement of the community at large. The process was characterized by openness and participation, enabling community members to engage, and uphold transparency. The priority was on reconciliation, compensation, and the restoration of social balance, rather than on rigid legal penalties. The moral pressure exerted by the community ensured adherence to the elders' decisions, as the preservation of social harmony was deemed more significant than individual interests.

(d) Divination and Spiritual Consultation

Divination constituted a fundamental aspect of investigative practices prior to colonial rule. Traditional priests or diviners, known as *dibia* or *babalawo*, were thought to engage with spiritual entities to reveal concealed truths, identify wrongdoers, or find lost items. Instruments such as cowrie shells, kola nuts, and carved figures were employed to interpret divine messages. Although this method of inquiry possessed

¹³ (1921) 2 AC 399

¹⁴ Idahosa Osagie Ojo and Eghosa O. Ekhaton, 'PRE-COLONIAL LEGAL SYSTEM IN AFRICA: AN ASSESSMENT OF INDIGENOUS LAWS OF BENIN KINGDOM BEFORE 1897' (2021) 1(1) *University of Derby Repository* 1, 12

¹⁵ B. O. Nwabueze, *The History and Principles of Customary Law* (Spectrum Books 2018)

spiritual legitimacy, it was deficient in objectivity and reproducibility essential criteria for valid expert testimony.

In contrast, contemporary forensic evidence, as regulated by Section 68 of the Evidence Act 2011, accepts expert opinions solely when they are founded on specialized knowledge that can be empirically verified. Consequently, divination does not meet the criteria for expert evidence under Nigerian law. As noted by Okonkwo in his work, *Introduction to Nigerian Criminal Law*, divination may be regarded as the "cultural precursor" to forensic expertise, both seeking to reveal truths beyond ordinary perception, yet one is based on faith while the other relies on scientific principles.¹⁶

2.1(2) The colonial era:

The advent of British colonial governance in Nigeria signified a profound shift in the methodologies employed for crime investigation and the administration of justice. Prior to colonialism, criminal inquiries were predominantly reliant on traditional customs and spiritual endorsement; however, under British dominion, these practices were supplanted by Western legal frameworks grounded in English common law. From 1861 to 1960, the British instituted formal judicial systems, organized police forces, codified legal statutes, and introduced preliminary scientific techniques for evidence collection and presentation. This epoch thus marks the inception of modern forensic science in Nigeria. Following the annexation of Lagos the colonial administration commenced the implementation of the English legal system¹⁷. The Supreme Court Ordinance of 1876 officially established the Supreme Court of the Colony of Lagos and delineated the application of English common law, principles of equity, and statutes of general application¹⁸. These principles were subsequently expanded to other regions of the country through the Protectorate Proclamations of 1900 and the Supreme Court Ordinance of 1914, which followed the unification of the Northern and Southern Protectorates. This legal transplantation brought forth the English law of evidence,

¹⁶ Okonkwo: *Introduction to Nigerian Criminal Law* ed 2015

¹⁷ Lagos Treaty of Cession, 6 August 1861.

¹⁸ Supreme Court Ordinance of 1876 (Colony of Lagos)

encompassing the notions of admissibility, burden of proof, and the differentiation between civil and criminal evidence.

As noted this evolution "signified the replacement of the moral-religious framework of adjudication with a secular and technical proof system¹⁹." Justice became reliant on verifiable facts and evidence, moving away from communal beliefs or divine insights. The emphasis transitioned from reconciliation to formal adjudication, with the judge serving as an impartial arbiter strictly adhering to legal principles.

Another significant colonial advancement was the establishment of organized policing. The Consular Guard, formed in 1861 and later transformed into the Hausa Constabulary in 1879, eventually developed into what is now recognized as the Nigeria Police Force under the Police Ordinance of 1897²⁰. The colonial police were tasked with upholding law and order while aiding in criminal investigations. They implemented systematic documentation, record keeping, and early forensic identification methods, including fingerprinting and handwriting analysis. Fingerprinting, which became a prevalent identification technique in the British Empire following Sir Francis Galton's work in 1892, was gradually embraced in Nigeria as a means of identifying suspects and preventing impersonation.

Academics like Alemika noted that while colonial policing was characterized by repression and primarily served imperial interests, it also initiated the practice of evidence-based investigation²¹. This laid the foundational groundwork for Nigeria's subsequent forensic institutions, including the Criminal Investigation Department (CID).

The most notable legal development during the colonial period was the introduction of the Evidence Ordinance²². This legislation codified the principles governing the admissibility, relevance, and weight of evidence within Nigerian courts. It was modeled after the Indian Evidence Act²³, which was influenced by English common law principles, and the Ordinance brought rational and objective standards of proof into

19 T. Olawale Elias, *The Nigerian Legal System* (Routledge & Kegan Paul 1963)

20 Police Ordinance of 1897 (Colonial Statute); see also Legalpedia, 'HISTORY OF THE NIGERIA POLICE FORCE' (n.d.) <https://legalpediaonline.com/history-of-the-nigeria-police-force/> (accessed 11 November 2025)

21 E. O. Alemika, *Policing and Perceptions of Police in Nigeria* (Malthouse Press 1993) 30

22 Evidence ordinance of 1943

23 Indian evidence act of 1872

Nigerian legal practice. Furthermore, it delineated the roles of witnesses, confessions, expert testimony, and documentary evidence. Sections 135 to 140 of the current Evidence Act which superseded the 1943 Ordinance, continue to embody these colonial legacies by outlining the burden and standard of proof in criminal proceedings²⁴. The Ordinance mandated that evidence presented in court must be relevant and lawfully obtained to be admissible, marking a significant shift from previous traditional practices rooted in superstition or divine validation.

Additionally, the colonial courts restructured the judiciary in Nigeria. The British established a three-tier court system comprising the Supreme Court, Provincial Courts, and Native Courts. Although Native Courts maintained the application of customary law, their rulings were subject to the repugnancy doctrine, which nullified customs deemed contrary to natural justice, equity, and good conscience. This principle, affirmed in cases such as *Eshugbayi Eleko v. Government of Nigeria* was instrumental in abolishing practices such as trial by ordeal and oath-taking. The courts emphasized that justice should be grounded in factual evidence and legal reasoning, rather than religious or mystical justifications.²⁵

Post-colonial era:

Nigeria's independence in 1960 signified the onset of a new chapter in the evolution of forensic evidence and the criminal justice framework. Although the colonial institutions, including the police, judiciary, and evidentiary laws, were preserved, there were gradual initiatives to modify them in accordance with local contexts and contemporary scientific benchmarks. This period saw the professionalization of criminal investigations, the establishment of forensic laboratories, and the updating of evidentiary regulations to incorporate new technologies.²⁶

In the aftermath of independence, the newly established Nigerian government upheld the Evidence Ordinance²⁷, which continued to direct judicial processes until it was superseded by the present Evidence

²⁴ S135-140 Evidence Act 2011 (as amended)

²⁵ (1931) AC662

²⁶ M. A. Inyang and O. O. Goodwill, 'A Legal Prognosis of the Significance of Forensic Evidence in Criminal Investigation in Nigeria and South Africa' (2020) 14(2) *Agora International Journal of Judicial Sciences* 215, 219.

²⁷ Evidence ordinance of 1943

act²⁸. The years following colonial rule were marked by incremental reforms rather than sweeping transformations. The government initiated the localization of expertise by educating Nigerian lawyers, judges, and police personnel in forensic and investigative techniques that had previously been the domain of foreign nationals. As noted by T.O. Elias, this era represented the "Nigerianization" of legal and scientific practices, signifying the transfer of legal and forensic authority from colonial administrators to Nigerian experts.²⁹

A significant advancement during this time was the establishment of the Criminal Investigation Department (CID) within the Nigeria Police Force, which assumed the investigative responsibilities that had been overseen by British officers. The CID was organized into various units, including the Homicide Section, Anti-Fraud Section, and the Forensic and Fingerprint Unit. These divisions implemented systematic crime investigation methodologies, criminal record management systems, and evidence documentation protocols. The adoption of fingerprint registration, ballistics analysis, and handwriting examination emerged as essential instruments for connecting suspects to criminal activities.

The first prominent forensic laboratory in Nigeria was inaugurated in the 1970s in Lagos, aimed at aiding the police in the scientific examination of evidence such as blood, semen, narcotics, and firearms³⁰. Subsequently, forensic facilities were established in various regions, such as Kaduna and Enugu. These institutions contributed to the modernization of criminal investigations; however, they frequently faced challenges related to insufficient funding and a shortage of personnel. Researchers, including Chukwuma, noted that despite these advancements, the application of forensic science in Nigeria continued to be restricted due to inadequate infrastructure and an excessive dependence on confessional evidence.³¹

Following Nigeria's attainment of independence, the post-colonial era ushered in a renewed phase of institutional growth and modernization within the justice system. The newly established Nigerian government sought to consolidate the colonial structures it inherited while adapting them to reflect national

²⁸ Ibid

²⁹ T.O. Elias: *Law and Social Change in Nigeria* (1972)

³⁰ Nigeria Police Force (NPF), 'History of the Force Criminal Investigation Department (FCID)' (n.d.) <https://www.npf.gov.ng/fcid/> (accessed 11 November 2025)

³¹ Chukwuma I, *Policing in Nigeria: Issues and challenges* (1994)

identity, cultural values, and the realities of a developing state. During this period, the use of forensic evidence began to attract more deliberate attention, as the country recognized the importance of scientific methods in criminal investigation and prosecution. The expansion of urban centers, rising crime rates, and the increasing complexity of criminal behavior created a need for more reliable investigative tools that could provide certainty where human testimony was weak or unreliable.³²

In this context, forensic practice in Nigeria gradually evolved from a peripheral investigative aid into an essential part of the justice process. Medical practitioners, laboratory scientists, and police investigators started to develop specialized skills in areas such as fingerprint analysis, post-mortem examination, and chemical testing for toxic substances. Although progress was uneven, the post-colonial period marked the beginning of awareness that the administration of justice required not only traditional and moral reasoning but also the application of modern science. Training programs for law enforcement officers were expanded to include rudimentary crime-scene management and evidence preservation, while universities and medical institutions began to expose students to forensic medicine as an emerging discipline.

This era was also characterized by a growing consciousness about the role of objectivity in justice delivery. As Nigeria developed socially and politically, the limitations of purely testimonial evidence became increasingly evident. Investigators and prosecutors started to rely more on material proof derived from scientific analysis to corroborate witness accounts, particularly in sensitive crimes such as homicide and sexual violence. Forensic examination of bodily fluids, hair, and other biological materials became more recognized as credible means of linking offenders to their crimes. Though these developments were gradual and challenged by inadequate facilities, poor funding, and limited technical expertise, they reflected a steady movement toward modernization in evidence evaluation.

Overall, the post-colonial period laid the foundation for the contemporary application of forensic science in Nigeria. It marked the country's gradual transition from dependence on colonial investigative systems to the establishment of indigenous capacity for scientific inquiry within law enforcement. This historical evolution

32 S. O. Osugba and M. I. Ogbeyi, 'The use of forensic evidence in criminal investigations (A study of Nigeria police force)' *International Journal of Humanities and Social Science Research* 2019

reinforced the principle that justice must be grounded in verifiable evidence, setting the stage for the more sophisticated forensic developments witnessed in the modern era.

The modern or contemporary Era

The contemporary period signifies the most advanced stage in the evolution of forensic evidence within Nigeria. It spans from the early 2000s to the current day, marked by technological advancements, institutional reforms, and a growing acknowledgment of forensic science as a vital element of criminal justice administration³³. This era illustrates Nigeria's persistent endeavor to align its investigative and evidentiary practices with international benchmarks through the integration of contemporary scientific methodologies such as DNA profiling, digital forensics, toxicology, and cybercrime investigation.

The evolution of modern forensic science in Nigeria has been shaped by the dual forces of globalization and transnational crime, alongside judicial reform. The emergence of intricate crimes, including terrorism, kidnapping, financial fraud, and sexual offenses, has highlighted the limitations of traditional policing techniques and generated a significant demand for scientific investigation. Consequently, the government and security agencies have increasingly adopted forensic technologies to enhance criminal detection, evidence gathering, and prosecution results.

A pivotal advancement of this period is the implementation of DNA analysis and biometric identification. The establishment of the Nigeria Police Forensic Laboratory in Lagos, followed by the creation of the DNA Forensic Centre in 2017, represented a crucial milestone in forensic investigation³⁴. These laboratories now play a vital role in analyzing biological samples such as blood, semen, saliva, and hair to determine identity, paternity, or connect suspects to crime scenes. DNA profiling has gained particular significance in cases of sexual violence and homicide, as it offers nearly definitive identification of offenders. In the case of *FRN v. Ibori*, the court recognized the critical role of scientific and documentary evidence in substantiating

33 P. E. Oniha and M. O. Oniha, 'Forensic evidence in Nigeria's criminal justice system: legal and institutional frameworks, challenges, and prospects' (2018) 2(1) *International Journal of Criminal Justice Research* 1, 3.

34 M. Ope-ogunseitan, 'Forensics: the missing link in Nigerian criminal investigation' (2016) 2 *Journal of the Mooting Society University of Lagos*

complex crimes, underscoring that forensic evidence bolsters the credibility of prosecution cases when presented appropriately.³⁵

The contemporary era has also seen the legal acknowledgment of electronic and digital evidence. With the swift proliferation of information technology, cybercrime, internet fraud, and digital communication have emerged as prevalent aspects of modern criminal behavior. In response, the Evidence Act 2011 introduced specific sections (notably Sections 84–89) that outline the criteria for the admissibility of computer-generated and electronic evidence³⁶. Since then, courts have implemented these provisions in various cases, including *Kubor v. Dickson* where the Supreme Court determined that electronically generated documents and emails are admissible provided their authenticity is verified as mandated by law³⁷. This judicial endorsement of digital materials signifies Nigeria's shift into the contemporary evidentiary era, where scientific and technological evidence is regarded on par with traditional documentary and oral evidence.

Another significant facet of the modern forensic landscape is the utilization of forensic pathology, toxicology, and ballistics in criminal investigations. The employment of medical autopsies to ascertain causes of death, toxicological assessments to detect poisons or drug concentrations, and ballistic evaluations to trace firearms has gained increased prominence. In homicide investigations, forensic pathologists now furnish expert reports that assist courts in accurately determining the nature and cause of death. These advancements indicate a rising dependence on specialized expert testimony, consistent with Section 68 of the Evidence Act 2011, which permits courts to depend on expert opinions in disciplines necessitating scientific expertise.³⁸

Nigeria's initiatives to enhance forensic science have also encompassed institutional and policy reforms. The Economic and Financial Crimes Commission (EFCC) and the Independent Corrupt Practices and Other Related Offences Commission (ICPC) have set up forensic and cybercrime units aimed at investigating financial fraud and money laundering through the use of digital tools. In a similar vein, the National Drug

³⁵ (2014) LPELR-22731(CA)

³⁶ Evidence Act 2011, s 84–89.

³⁷ (2013) 4 NWLR (PT. 1345)534

³⁸ Evidence Act 2011, s 68

Law Enforcement Agency (NDLEA) utilizes forensic chemistry to examine narcotic substances. The National Identity Management Commission (NIMC) and Nigeria Immigration Service (NIS) employ biometric and facial recognition technologies for individual identification, a development that bolsters both civil registration and criminal investigations.

Judicial perspectives have adapted to mirror these scientific advancements. Courts now attribute greater significance to expert and scientific testimony, provided it adheres to standards of reliability and relevance. The Supreme Court has consistently underscored that forensic evidence, when properly acquired and authenticated, can serve as a foundation for conviction even in the absence of eyewitness testimony. This principle was exemplified in *Ojo v. FRN*, where the court affirmed the use of forensic and documentary evidence as adequate proof of criminal activity.³⁹

Nevertheless, despite these advancements, contemporary forensic practices in Nigeria continue to encounter significant challenges. Numerous forensic laboratories are underfunded, lack modern equipment, and suffer from insufficient technical expertise. There is a scarcity of trained forensic scientists, and the lack of a centralized DNA database obstructs effective criminal identification. Furthermore, poor coordination among law enforcement agencies and delays in laboratory analyses frequently undermines the evidentiary chain in criminal prosecutions. Scholars such as Akinseye-George have noted that the credibility of forensic evidence in Nigeria still depends heavily on the competence of investigators and the integrity of the evidence handling process.⁴⁰

Modern Nigeria has increasingly recognized the critical role of forensic investigation in addressing complex and sensitive crimes such as sexual violence, murder, armed robbery, terrorism, and cybercrime. Law enforcement agencies have taken steps toward establishing forensic laboratories and training specialized personnel to handle evidence professionally. Medical and biological analysis, fingerprint identification, ballistic testing, and digital forensics have gradually become part of investigative routines. Though still

³⁹ 11 NWLR (Pt. 1099) 467

⁴⁰ Y. Akinseye-George, *Criminal Justice Administration in Nigeria* (Lawlords Publications 2019)

developing, these practices reflect an ongoing national effort to align with global standards in the administration of justice. Universities, medical schools, and police training academies now incorporate forensic-related courses, signifying an academic and institutional awareness of the field's importance. Furthermore, public perception of forensic evidence has evolved significantly. The Nigerian public increasingly associates forensic investigation with fairness, objectivity, and scientific precision. In cases of sexual violence in particular, forensic evidence has given victims a stronger voice by providing tangible proof that can support their testimonies and counter the problem of underreporting or disbelief. Media coverage and public education on the use of forensic science have also contributed to a broader understanding of its societal relevance. This cultural shift indicates a departure from earlier eras where criminal proof relied heavily on oral accounts or moral judgments. Despite these positive developments, the modern era has not been without challenges. The country still grapples with inadequate funding, shortage of forensic experts, and insufficient infrastructure to support advanced scientific analysis. Many police divisions lack proper facilities for evidence preservation, while delays in processing laboratory results can hinder the speed of justice. Nonetheless, the increasing collaboration between medical institutions, law enforcement, and private research bodies demonstrates a commitment to improvement. Gradual investments in technology and training continue to strengthen the credibility and effectiveness of forensic practice in Nigeria.

2.2 Types of forensic evidence

Forensic evidence refers to any scientific or technical material that assists a court in determining the facts of a case. It derives its name from the Latin word *Forensis*, meaning “of the forum,” where legal matters were debated in ancient Rome. In modern criminal justice systems, including Nigeria's, forensic evidence bridges the gap between science and law by providing objective proof to support or challenge claims made

in court⁴¹. The admissibility of such evidence in Nigeria is guided by the Evidence Act, 2011, particularly sections dealing with expert opinion (Sections 67–76)⁴².

Broadly, the types of forensic evidence used in criminal and civil investigations can be classified into several major categories:

(a) DNA Evidence

DNA (Deoxyribonucleic Acid) evidence is one of the commonest and most reliable forms of forensic proof, especially in sexual crimes investigations.

It is used to identify individuals with high level of accuracy by comparing genetic material obtained from biological sample such as blood, semen, saliva or hair follicles. In Nigeria DNA analysis has become an important mechanism in rape, homicide and paternity cases. Each person possesses a unique DNA profile, except in the case of identical twins. This uniqueness has made DNA analysis one of the most reliable methods of identification in forensic investigations and the administration of criminal justice.

In forensic science, DNA evidence involves the collection, analysis, and comparison of biological materials obtained from a crime scene with those of a suspect or victim. Such materials may include blood, saliva, semen, hair roots, skin tissues, or other bodily fluids⁴³. Through a process known as DNA profiling or DNA fingerprinting, scientists are able to determine whether there is a genetic match between the samples. When a match is established, it serves as strong scientific proof of a connection between an individual and the crime scene, or conversely, it may serve to exonerate an innocent person.

The process of DNA analysis relies on specific scientific methods. The most common techniques include Polymerase Chain Reaction (PCR), which enables the amplification of small DNA samples for testing; Short Tandem Repeat (STR) analysis, which examines particular sequences in the DNA to form a genetic profile; and Mitochondrial DNA testing, which is especially useful in cases involving degraded or old

41 US Legal Forms, 'Forensic Evidence: Understanding Its Legal Definition' (n.d.) <https://legal-resources.uslegalforms.com/f/forensic-evidence>

42 Evidence Act 2011, s 67–76.

43 M. A. Inyang and O. O. Goodwill, 'A Legal Prognosis of the Significance of Forensic Evidence in Criminal Investigation in Nigeria and South Africa' (2020) 14(2) *Agora International Journal of Judicial Sciences* 215, 222

biological samples. These scientific methods have been internationally recognized as reliable and are used in many forensic laboratories across the world, including those in Nigeria.

Under Nigerian law, the admissibility of DNA evidence is guided by the Evidence Act 2011, particularly Sections 67 to 76, which recognize expert opinions on matters requiring scientific or technical knowledge. A forensic scientist who carries out DNA analysis qualifies as an expert within the meaning of these provisions. For DNA evidence to be admissible, it must satisfy certain conditions: it must be relevant to a fact in issue, properly collected and preserved to maintain the chain of custody, conducted by a qualified expert, and tendered through a credible forensic laboratory⁴⁴. When these requirements are met, Nigerian courts have shown willingness to accept and rely on such scientific proof. In *FRN v. Osahon*, the Court of Appeal acknowledged the evidential value of scientific and expert evidence in strengthening a prosecution's case, provided it is properly tendered and authenticated⁴⁵.

The practical applications of DNA evidence in Nigeria are wide ranging. In criminal investigations, DNA profiling is used to link suspects to crime scenes or to clear those wrongly accused. In family law, it has become essential in resolving paternity disputes, inheritance claims, and maintenance proceedings, offering a scientific means of determining biological relationships. DNA analysis is also crucial in sexual offence cases, such as rape, where it helps identify perpetrators or corroborate victims' testimonies. Furthermore, in mass disaster situations, such as plane crashes or building collapses, DNA testing is used for the identification of victims' remains when visual recognition is impossible. The establishment of the Lagos State DNA and Forensic Centre (LSD&FC) in 2017 marked a significant milestone in Nigeria's criminal justice system, providing local capacity for DNA testing and reducing dependence on foreign laboratories⁴⁶. Nevertheless, the probative value of DNA evidence remains extremely high. When properly handled, it can either firmly establish guilt or completely exonerate a suspect. Although courts often treat DNA results as corroborative rather than conclusive evidence, the probability of error in DNA matching is statistically

44P. E. Oniha and M. O. Oniha, 'Forensic evidence in Nigeria's criminal justice system: legal and institutional frameworks, challenges, and prospects' (2018) 2(1) *International Journal of Criminal Justice Research* 1, 5

45 (2014) LPELR-22731(CA)

46 Lagos State Ministry of Justice, 'Lagos State DNA and Forensic Centre (LSD&FC)' (n.d.) <https://lagosministryofjustice.org/lagos-state-dna-and-forensic-centre-lsdfc/>

negligible often less than one in a billion. This makes it one of the most persuasive and objective forms of evidence available to the courts.

The importance of DNA evidence extends beyond merely identifying offenders. It also helps in exonerating wrongly accused individuals, identifying victims of disasters, and establishing paternity or kinship in disputed family matters. In criminal investigations, DNA evidence provides a level of scientific certainty that other types of evidence such as eyewitness accounts or confessions cannot always guarantee. It plays a crucial role in cases of sexual assault, homicide, and child trafficking, where biological traces often serve as the most compelling proof of contact between individuals. The process of collecting and handling DNA evidence requires strict adherence to procedural standards. Investigators must use sterile instruments, wear gloves, and avoid contamination during collection. Samples must be properly labelled, preserved at appropriate temperatures, and documented to maintain the chain of custody. Any lapse in these procedures can compromise the integrity of the results, leading to wrongful conclusions. Therefore, trained forensic experts are usually involved in every stage, from collection at the crime scene to analysis in the laboratory. Despite its remarkable accuracy, DNA evidence is not without challenges, from contamination, poor storage, and human error during analysis can lead to misleading results. There are also ethical and privacy concerns surrounding the creation and use of DNA databases, as misuse could threaten individual rights. Nevertheless, when handled with care and professionalism, DNA evidence remains the most powerful tool in modern forensic science, combining biology and technology to uncover truth, deliver justice, and strengthen the credibility of criminal investigations.

(b) Fingerprint Analysis

Fingerprint analysis remains a traditional yet dependable form of forensic identification. Every individual possesses unique ridge patterns on their fingers, making fingerprints an invaluable tool in linking a suspect

to a crime scene⁴⁷. The Nigeria Police Force (NPF) routinely uses fingerprint databases for criminal records and background checks⁴⁸

This form of evidence, when properly obtained and analyzed by an expert, is admissible under the Evidence Act as an expert opinion⁴⁹. However, its probative value depends on the chain of custody and the qualifications of the forensic examiner.

Fingerprint evidence is one of the oldest and most reliable methods of forensic identification. Every individual possesses unique ridge patterns on their fingers, which remain unchanged throughout life. These distinct patterns make fingerprints an invaluable tool in linking a suspect to a crime scene or object, and their use has been universally accepted in criminal investigations.

In forensic science, fingerprint evidence is obtained from latent (invisible) or visible prints left on surfaces such as glass, metal, or paper. Latent prints are developed using chemical powders, fumes, or digital enhancement techniques, while visible prints can be photographed and compared directly. The analysis involves comparing the ridge characteristics and minutiae points between a print collected at a crime scene and that of a suspect. When a sufficient number of matching points are identified, an expert may conclude that both prints originated from the same person.

Under Nigerian law, fingerprint evidence is recognized as a form of expert opinion admissible under Sections 67–76 of the Evidence Act 2011, which allow the court to consider opinions based on scientific or technical knowledge⁵⁰. The admissibility of fingerprint evidence depends on proper collection, preservation, and the expertise of the examiner. Any failure in the chain of custody or contamination of the sample may weaken its probative value. In *Ikemson v. State*, the Supreme Court recognized the evidential value of fingerprint analysis in establishing a suspect's presence at the crime scene⁵¹. Despite its reliability, fingerprint evidence faces certain challenges in Nigeria, including inadequate forensic laboratories, lack of

47 US Legal Forms, 'Forensic Evidence: Understanding Its Legal Definition' (n.d.) <https://legal-resources.uslegalforms.com/f/forensic-evidence>

48 Nigeria Police Force (NPF), 'Forensic Unit' (n.d.) <https://www.npf.gov.ng/forensic-unit/>

49 Adegbite, K., 'Law and forensic: techniques of evidence gathering and case presentation in court' (2013) Nigeria Village Square

50 S 67-76 Evidence Act 2011 (as amended) 2023

51 (1989) 3 NWLR (Pt. 110) 455, 470 (SC)

modern technology, and insufficiently trained personnel. However, its strength lies in its permanence, uniqueness, and ease of comparison, which make it one of the most dependable forms of forensic evidence available to the courts.

Fingerprint evidence is one of the oldest and most dependable methods of human identification used in forensic science. Every individual possesses a unique pattern of ridges and furrows on the skin of their fingers and palms, formed before birth and remaining unchanged throughout life. These patterns loops, whorls, and arches differ from person to person, even among identical twins. Because of their uniqueness and permanence, fingerprints have become a vital tool in linking suspects to crime scenes and in establishing proof of physical contact or presence.

In sexual violence investigations, fingerprint evidence has become increasingly important in establishing the presence or actions of a suspect. While DNA evidence is often considered the most direct biological link, fingerprints can serve as crucial supporting proof, particularly when DNA samples are unavailable or degraded⁵². For instance, fingerprints recovered from objects such as clothing, door handles, mobile phones, or weapons at the scene of a sexual assault can place a suspect in the same location or demonstrate physical interaction with the victim. This becomes especially relevant in cases where the victim and perpetrator were previously known to each other, and the issue in dispute is often consent or force. The presence of the suspect's fingerprints on the victim's belongings or on restricted areas of the crime scene strengthens the narrative of unlawful contact.

In Nigeria, the relevance of fingerprint evidence is increasingly recognized by law enforcement agencies, particularly through the forensic units of the Nigeria Police Force. Modern technology now allows for digital fingerprint capture, automated comparison, and preservation of fingerprint databases. However, challenges such as limited technical facilities, poor handling of evidence, and lack of awareness among investigators sometimes hinder the effective use of this form of evidence. Nonetheless, ongoing training and the gradual integration of forensic science into police procedures have improved its reliability and

⁵² Ibid

acceptance in court. Fingerprint evidence holds a special advantage in a system where testimonial evidence often dominates. It provides neutral and factual proof that does not rely on human memory or emotion, making it a critical safeguard against wrongful conviction or denial of justice. In sexual violence cases which are highly sensitive and often lack witnesses fingerprint evidence helps establish credibility, supports the victim's account, and strengthens prosecutorial arguments through science based validation.

(c) Toxicological and Odontological Evidence

Toxicological evidence is concerned with the detection, identification, and analysis of poisons, drugs, alcohol, and other chemical substances in the human body. It plays a critical role in determining whether a person's death or condition was caused by a toxic substance, overdose, or chemical exposure⁵³. Toxicological analysis is usually carried out on biological samples such as blood, urine, stomach contents, or tissue during autopsy or clinical examination.

In criminal investigations, toxicological evidence is especially relevant in cases of suspected poisoning, drug abuse, alcohol-related offences, and homicide. It helps the court establish the cause of death or impairment through objective scientific findings. For instance, where a victim's death is suspected to result from poison, toxicological results provide proof of the type and concentration of the substance, thereby supporting the pathologist's testimony.

Under Nigerian law, such evidence falls under expert opinion as recognized by Sections 67–76 of the Evidence Act 2011⁵⁴. The forensic toxicologist who conducts the examination is considered an expert, and the admissibility of their report depends on relevance, proper sampling, and chain of custody. Nigerian teaching hospitals and forensic laboratories, such as the Lagos State DNA and Forensic Centre, have contributed to the growing use of toxicological testing in criminal investigations⁵⁵.

However, toxicological evidence in Nigeria faces challenges including the scarcity of sophisticated equipment, limited forensic experts, and risk of sample contamination. Despite these obstacles, its

⁵³ Ibid

⁵⁴ Evidence Act 2011, s 67–76.

⁵⁵ Lagos State Ministry of Justice, 'Lagos State DNA and Forensic Centre (LSD&FC)' (n.d.) <https://lagosministryofjustice.org/lagos-state-dna-and-forensic-centre-lsdfc/>

evidential value remains high, as it provides scientific confirmation of cause of death or intoxication. Thus, toxicological analysis continues to be a vital tool in both criminal and civil proceedings involving poisoning, drug-related deaths, or environmental exposure.

(d) Odontological (Dental) Evidence

Odontological evidence, also known as forensic odontology, involves the use of dental science in the identification of individuals and in the investigation of crimes⁵⁶. Teeth are among the most durable structures in the human body and can withstand decomposition, fire, and other extreme conditions that may destroy other forms of evidence. This durability makes odontological evidence extremely valuable in situations where bodies are burnt, mutilated, or decomposed beyond recognition.

Forensic odontologists examine dental records, bite marks, tooth alignment, and jaw structures to identify individuals or link suspects to victims. In disaster victim identification (DVI), such as plane crashes, building collapses, or mass accidents, dental evidence helps in confirming the identity of victims when DNA or fingerprint evidence is unavailable. Similarly, in sexual assault and homicide cases, bite mark analysis can connect a suspect to a victim or an object.

While forensic odontology is still developing in Nigeria, it has proven useful in a few medico-legal cases, particularly through collaboration between forensic departments and dental institutions. The admissibility of odontological evidence in Nigerian courts is also based on expert opinion under the Evidence Act 2011, provided the expert is duly qualified and the methods used are scientifically reliable⁵⁷.

Nevertheless, this type of evidence must be approached cautiously, as bite mark comparisons can be subjective if not properly analyzed using modern techniques. Despite such limitations, odontological evidence remains a powerful investigative and identification tool, complementing DNA and fingerprint analysis in forensic science.

(e) Ballistic Evidence

⁵⁶ E. C. Ebe and A. O. Ede, 'Forensic Evidence and the Criminal Justice System of Nigeria' (2022) 13(1) *Nsukka Journal of International Law and African Studies* 1

⁵⁷ P. E. Oniha and M. O. Oniha, 'Forensic evidence in Nigeria's criminal justice system: legal and institutional frameworks, challenges, and prospects' (2018) 2(1) *International Journal of Criminal Justice Research* 1, 7.

Ballistics relates to the study of firearms, bullets, and cartridge cases. Ballistic experts determine whether a specific firearm fired a particular bullet and can reconstruct shooting incidents. In cases of armed robbery and homicide, ballistic evidence has been instrumental in identifying weapons and perpetrators.⁵⁸

Sections 68 and 75 of the Evidence Act 2011 recognize expert opinions, including those from ballistic examiners, as admissible where they assist the court in forming a conclusion on technical matters⁵⁹.

In many instances of sexual violence, offenders use guns or other firearms to threaten, intimidate, or subdue victims. The presence of a firearm changes the dynamics of consent, as the victim is forced to comply under fear of death or serious harm. In such cases, the recovery and analysis of ballistic evidence can help establish the circumstances under which the sexual offence occurred. For example, spent bullet casings, live ammunition, or gunshot residue (GSR) found on the suspect or at the crime scene can corroborate the victim's testimony that a gun was used to facilitate the assault⁶⁰.

Ballistic experts may also determine whether a firearm recovered from a suspect was discharged recently, whether it matches bullet fragments found at the scene, or whether the gunshot residue on a suspect's hands proves recent use. Such findings strengthen the prosecution's case by linking the weapon to the accused and confirming the element of force or intimidation, which is crucial in proving sexual offences under Nigerian law, particularly under Sections 357–358 of the Criminal Code Act and Section 1 of the Violence Against Persons (Prohibition) Act 2015 (VAPP Act).⁶¹

In some aggravated sexual assault cases, victims may sustain gunshot injuries before, during, or after the rape. Ballistic analysis in such cases helps to reconstruct the sequence of events and identify the weapon used, which supports both forensic and testimonial evidence. Additionally, the mere recovery of a firearm from the suspect when matched through ballistic comparison can demonstrate a consistent pattern of conduct, establishing intent and credibility of the victim's account.

58 James L Cross, 'The Indispensable Role of Ballistic Evidence in Forensic Science' (2001) 45(2) *Journal of Forensic Sciences* 210

59 S 68 and 75 Evidence Act 2011

60 National Forensic Service Nigeria, 'Guidelines for the Recovery and Analysis of Ballistic Evidence in Sexual Assault Cases' (NFS Publication 2023)
<https://www.nfs.gov.ng/reports/2023/guidelines.pdf>

61 S 357–358 of the Criminal Code Act, s 1 of the Violence Against Persons (Prohibition) Act 2015 (VAPP Act)

Therefore, although ballistic evidence does not directly prove sexual contact, it plays an indirect but corroborative role in proving use of force, intimidation, or coercion, all of which are vital elements of the offence of rape or sexual assault. It also assists in identifying the suspect, linking them to the scene, and substantiating the victim's narrative.

The term "ballistics" comes from the study of projectiles in motion from the moment a bullet is fired until it strikes a target. Through meticulous examination, ballistic experts can uncover vital clues that reveal how a crime occurred, who may have fired the weapon, and under what circumstances.

The foundation of ballistic evidence lies in the principle that every firearm leaves unique microscopic markings on bullets and cartridge cases when fired. These markings, caused by the mechanical parts of the weapon such as the barrel, firing pin, and extractor act as the weapon's "fingerprint."⁶² When investigators recover spent bullets or shells from a crime scene, these can be compared under a microscope with test-firings from a suspect's gun to determine whether they match. This form of comparison helps establish a physical link between the weapon, the suspect, and the crime scene, providing highly persuasive evidence in criminal prosecutions.

Despite its immense value, the use of ballistic evidence faces challenges such as limited forensic infrastructure, inadequate equipment, and a shortage of trained ballistic examiners. Nonetheless, continuous reforms and collaborations with forensic centres and international partners have begun to enhance firearm analysis capabilities across the country. Ballistic evidence provides an indispensable scientific foundation for solving violent crimes. Its precision and objectivity help reconstruct events, identify offenders, and link weapons to crimes with a level of certainty unattainable through mere witness accounts. In sexual violence cases where firearms are used to exert control and fear, ballistic evidence serves not only as proof of force but also as a silent witness to the trauma endured by victims. Through proper handling and expert interpretation, it strengthens the pursuit of justice and reinforces the credibility of forensic science in Nigeria's criminal justice system.

62 Michael S Miller, *Firearms and Forensic Evidence: A Comprehensive Guide* (Academic Press 2018) 89

(f) Pathological and Medical evidence

Forensic pathology involves the examination of bodies to determine the cause and manner of death. The evidence provided by pathologists during post-mortem examinations is important in homicide and suspicious death cases. In Nigeria, pathologists' reports are admissible under the Evidence Act as expert opinion, provided they are relevant and based on proper scientific examination.⁶³

Pathological and medical evidence play a crucial role in the investigation and prosecution of sexual violence offences. These forms of evidence are derived from the scientific examination of a victim's or suspect's body to identify signs of sexual assault, injury, or cause of death. They are often provided by qualified medical practitioners, forensic pathologists, or gynaecologists, whose expert opinions assist the court in determining whether a sexual offence occurred and the extent of physical or psychological harm suffered.⁶⁴

Forensic pathology deals primarily with the medical examination of deceased victims of sexual violence, especially in cases where rape is accompanied by homicide. Through post-mortem analysis, the pathologist can determine the cause and manner of death, identify injuries consistent with sexual assault (such as genital trauma, bruising, or internal bleeding), and recover biological samples like semen, blood, or tissue for DNA testing. Such evidence provides objective scientific support to the prosecution's case and helps reconstruct the circumstances surrounding the offence. For example, where a victim was strangled during a sexual assault, the presence of petechial haemorrhages or genital injuries confirmed through autopsy becomes crucial pathological proof of violence and intent.⁶⁵

Medical evidence, on the other hand, focuses on the living victim and is usually obtained during a medical examination shortly after the assault. The examining doctor documents findings such as vaginal or anal tears, lacerations, abrasions, and signs of struggle. Medical reports also include laboratory results from samples collected during the examination semen, saliva, blood, or vaginal swabs, which are later subjected

⁶³ Evidence Act 2011, ss 68, 75.

⁶⁴ Adebayo Oyeboode, 'The Role of Forensic Evidence in the Prosecution of Sexual Offences in Nigeria' (2020) 14(1) *Nigerian Law Journal* 45

⁶⁵ Jane N Agomo, *Forensic Pathology and the Law of Evidence in Nigeria* (University of Lagos Press 2021) 112.

to DNA analysis to link a suspect to the assault. The Medical Report (Form 33) used by the Nigerian Police and hospitals serves as an official record in sexual offence investigations and is often tendered as expert evidence under Sections 67–76 of the Evidence Act 2011.⁶⁶

Beyond physical injuries, medical practitioners may also assess the victim for sexually transmitted infections (STIs), pregnancy, or psychological trauma, which are indirect consequences of sexual violence. These findings help in both criminal proceedings and victim rehabilitation. Courts in Nigeria have repeatedly relied on such evidence to corroborate victims' testimonies, recognizing that medical proof is not mandatory for conviction but significantly strengthens the prosecution's case. In *State v. Olayinka*, the court held that medical evidence, where available, provides credible corroboration of the victim's account of sexual assault.⁶⁷

In cases involving minors or incapacitated persons, medical and pathological findings are even more vital, as they objectively establish penetration or attempted penetration, A key element in proving rape or defilement under Section 1 of the Violence Against Persons (Prohibition) Act 2015 and Sections 357–358 of the Criminal Code Act⁶⁸. In fatal cases, the autopsy may also reveal whether the victim died as a result of the assault or from secondary injuries inflicted to conceal the crime.

Despite its importance, the use of medical and pathological evidence in Nigeria faces challenges such as inadequate forensic facilities, lack of trained forensic pathologists, delayed medical examination, and contamination of samples. These factors can compromise the quality and reliability of the evidence presented in court. Nonetheless, when properly obtained and documented, pathological and medical evidence remain among the most persuasive and objective proofs in sexual violence cases, offering the courts scientific insight that complements eyewitness and testimonial evidence.

(g) Crime scene and Biological evidence

⁶⁶ Evidence Act 2011, s 67-76. The use of Form 33 is a standard police practice detailed in police procedure guides.

⁶⁷ Evidence Act 2011, s 67-76. The use of Form 33 is a standard police practice detailed in police procedure guides.

⁶⁸ Ibid

Crime scene evidence forms the foundation of every forensic investigation. It refers to all physical materials or traces recovered from the location where a crime occurred. This includes objects, substances, and impressions that can help reconstruct events or identify the individuals involved⁶⁹. A crime scene may contain biological materials, weapons, fingerprints, footprints, fibres, or digital devices each serving as a potential clue to the truth.

Proper crime scene management is critical to the integrity of forensic evidence. Investigators must secure the scene, photograph and document its condition, and collect materials using standard procedures that maintain the chain of custody. Any contamination or mishandling may render the evidence inadmissible in court. In Nigeria, agencies such as the Nigeria Police Force and the Lagos State DNA and Forensic Centre employ trained forensic experts to process crime scenes scientifically⁷⁰. The objective is to ensure that every recovered item is authentic, relevant, and capable of supporting the elements of the offence charged.

Moreover, crime scene evidence provides the initial link between the suspect, the victim, and the offence. Items such as broken glass, bullet casings, bloodstains, or discarded clothing may reveal vital clues. Forensic specialists later analyze these materials to establish the sequence of events and determine how the crime unfolded. In sexual violence investigations, for instance, the preservation of the victim's clothing, bedding, or weapons used during the assault often provides critical proof that complements medical and DNA findings.

In cases of sexual violence, crime scene evidence is especially crucial. The scene may include the victim's clothing, bedding, personal items, or surfaces that contain biological traces such as semen, saliva, or blood. These materials can later be analyzed for DNA, linking the perpetrator to the offence. Additionally, items like torn fabric, disarranged furniture, or signs of forced entry can help prove that violence or coercion occurred. Even the absence of expected evidence for example, cleaned surfaces or missing items can provide investigative clues, suggesting attempts to conceal or destroy proof of the crime. The reliability of crime scene evidence depends heavily on the professionalism and diligence of the investigators. Any

⁶⁹ Richard Li, *Forensic Biology: Biological Evidence in Criminal Investigations* (CRC Press 2016) 55

⁷⁰ Lagos State DNA and Forensic Centre, 'Annual Report on Crime Scene Processing and DNA Analysis 2023' <https://lsdfc.lg.gov.ng/reports/2023annualreport.pdf>

mishandling, contamination, or mislabeling can compromise the accuracy of forensic analysis and affect the outcome of a trial. Therefore, meticulous documentation, strict adherence to procedure, and collaboration between law enforcement officers, forensic scientists, and medical personnel are essential for maintaining evidentiary value.

Biological evidence on the other hand refers to any organic material from living organisms that can help identify individuals or determine how a crime occurred. Common examples include blood, semen, saliva, hair, skin cells, urine, and tissue samples⁷¹. This category of evidence is especially important because it carries DNA – the unique genetic fingerprint of each individual. When properly collected and analyzed, biological evidence can conclusively link a suspect to a crime scene or exonerate an innocent person.

In Nigeria, biological evidence plays a crucial role in homicide, rape, and if assault cases, as it provides scientific corroboration to eyewitness testimony. The process typically involves collecting samples at the scene, packaging them in sterile containers, and submitting them to forensic laboratories for analysis. DNA profiling derived from these materials assists investigators in identifying suspects, confirming paternity, and reconstructing events.

Furthermore, biological evidence can reveal the time, nature, and intensity of physical contact between individuals. For example, semen stains on a victim's clothing may confirm sexual penetration, while bloodstain pattern analysis can help determine the direction, position, or weapon used during an attack. Nigerian courts admit such evidence under Sections 67–76 of the Evidence Act 2011, provided it is tendered through a qualified expert and properly linked to the case facts.⁷²

2.3 Application of forensic evidence in sexual violence cases

The application of forensic evidence in Nigeria plays a very important role in the criminal justice system, assisting courts in identifying offenders, linking suspects to crimes, and ensuring justice through scientific

⁷¹ Michael M Baden and Jan C Ballard, *Handbook of Forensic Pathology* (3rd edn, CRC Press 2012) 88.

⁷² Evidence Act 2011, ss 67-76.

investigation. Forensic evidence bridges the gap between law and science, providing objective proof that strengthens prosecution and defences cases alike.⁷³

The advancement of science and technology has greatly transformed the process of criminal investigation and the administration of justice across the world. In Nigeria, the increasing rate of complex crimes such as terrorism, sexual violence, financial fraud, cybercrime, and homicide has exposed the limitations of traditional investigative methods, which often relied heavily on confessions, eyewitness testimonies, and circumstantial evidence⁷⁴. These traditional methods are susceptible to human error, coercion, and manipulation. As a result, there has been a growing reliance on forensic evidence, A scientific approach that provides objective, reliable, and verifiable proof in criminal and civil proceedings.

Forensic evidence refers to any form of scientific evidence obtained through the application of principles from disciplines such as biology, chemistry, physics, medicine, and information technology, which assists in establishing facts before a court of law. It includes, but is not limited to, DNA analysis, fingerprinting, toxicology, ballistics, digital forensics, and pathology⁷⁵. The central aim of forensic evidence is to assist the court in determining the truth by linking suspects to crimes, identifying victims, and reconstructing events scientifically.

In the Nigerian context, forensic evidence has gradually gained recognition as an essential tool in the justice system. The Evidence Act 2011 (as amended), particularly sections 68–70, provides the legal foundation for admitting expert opinion in matters that require scientific or technical knowledge. This statutory recognition allows forensic experts to assist judges and lawyers in understanding complex evidence that goes beyond ordinary human knowledge.⁷⁶

Moreover, the Administration of Criminal Justice Act (ACJA) 2015 has also encouraged the use of scientific methods in criminal investigation and prosecution. This development reflects a shift towards a

⁷³ Olabisi Ajayi, 'The Interface Between Forensic Science and Criminal Justice Administration in Nigeria' (2018) 10 *Journal of Law and Criminality* 32.

⁷⁴ Abiodun Odusote, 'Challenges of Traditional Investigative Methods in the 21st Century Nigerian Justice System' in Kemi Olowu (ed), *Contemporary Issues in Nigerian Law* (University of Lagos Press 2019) 215.

⁷⁵ PE Bowen, *Forensic Evidence in Criminal Proceedings* (Sweet & Maxwell 2015) 45

⁷⁶ Evidence Act 2011, ss 68-70.

more evidence-based justice system that aligns with international best practices⁷⁷. Institutions such as the Lagos State DNA and Forensic Centre, the Nigeria Police Forensic Department, and the EFCC Forensic Unit have also emerged as pivotal contributors to the use of forensic science in Nigeria.⁷⁸

⁷⁷Administration of Criminal Justice Act 2015, s 1

⁷⁸ Lagos State DNA and Forensic Centre, 'Official Website' <https://lsdfc.lg.gov.ng/> accessed 14 November 2025

CHAPTER THREE:

APPLICATION OF FORENSIC EVIDENCE IN SEXUAL VIOLENCE CASES IN NIGERIA

Sexual violence remains one of the most pervasive and underreported crimes in Nigeria, cutting across social, economic, and cultural boundaries. Despite the existence of laws prohibiting such acts, victims often face enormous barriers in seeking justice⁷⁹. These include social stigma, fear of retribution, inadequate investigative mechanisms, and the frequent lack of credible evidence. Traditional methods of proof which largely depend on eyewitnesses and oral testimonies, are often insufficient because sexual offences typically occur in private settings, leaving little or no direct evidence. Consequently, many cases collapse in court for want of proof, despite the occurrence of the crime.

In Nigeria, the growing application of forensic science reflects a global shift towards evidence-based justice. Law enforcement agencies, prosecutors, and medical practitioners are increasingly recognizing that physical and biological evidence can make the difference between conviction and acquittal. Forensic methods have proven particularly essential in sexual violence cases where the victim's account may stand alone without eyewitness support. Through forensic analysis, investigators can detect biological traces such as semen, saliva, or blood, reconstruct the sequence of events; and establish links between the suspect, the victim, and the crime scene.⁸⁰

The application of forensic evidence in sexual violence cases, therefore, represents a critical intersection between law and science. It underscores the importance of objective, scientific proof in establishing guilt or innocence, protecting victims' rights, and restoring public confidence in the justice system. As Nigeria continues to combat sexual offences, the effective integration of forensic science will remain an indispensable tool for achieving justice, deterrence, and societal trust.

3.1 DNA application and its admissibility in the Nigeria legal system

Sexual violence continues to be one of the most difficult offenses to substantiate within the Nigerian criminal justice framework. These acts are typically perpetrated in private settings, frequently devoid of

⁷⁹ Amnesty International Nigeria, 'Justice in Jeopardy: The State of Sexual Violence Response in Nigeria' (<https://www.amnesty.org/en/documents/afr44/4612/2021/en/>)

⁸⁰ Jane N Agomo, *Forensic Pathology and the Law of Evidence in Nigeria* (University of Lagos Press 2021) 112.

eyewitnesses, which positions the victim's account as the principal form of evidence. Nevertheless, while the victim's testimony is essential, it can encounter challenges regarding its credibility, particularly in instances where there are no observable injuries or direct corroborative evidence. In this context, DNA evidence has surfaced as a crucial scientific instrument that aids in the detection, investigation, and prosecution of sexual offenses. It offers objective verification that can either substantiate or contradict assertions of sexual interaction between the accused and the victim. In *Gbadamosi v. Kabo Travel Ltd* In this case, the Court of Appeal encouraged the use of modern technology like DNA testing, holding that "Judges are required to keep abreast of time and not to live in complete oblivion of happenings around them". This established a judicial willingness to accept scientifically sound evidence.⁸¹

The advent of Deoxyribonucleic Acid (DNA) technology in Nigerian criminal jurisprudence has revolutionized the evidentiary landscape in cases of sexual violence⁸². By examining biological samples such as semen, blood, saliva, or vaginal swabs obtained from victims or crime scenes, law enforcement can establish genetic connections between the suspect and the victim. This type of scientific evidence is particularly important in situations where the matters of consent or the identity of the offender are contested. In cases of sexual violence, DNA evidence is essential for connecting offenders to victims through biological materials such as semen, saliva, or blood. Although not explicitly stated in the Evidence Act 2011, DNA evidence is permissible under Sections 68, 83, and 84, which pertain to expert opinion, documentary, and electronic evidence⁸³. Nigerian courts are increasingly recognizing DNA results when relevance, authenticity, and expert credibility are demonstrated, as illustrated in *Anifowoshe v. Wosilat*⁸⁴, which confirmed the evidentiary value of scientific testing. In instances of rape, DNA can support a victim's account and identify assailants even in the absence of eyewitness testimony. Therefore, while DNA evidence is legally acceptable in sexual violence cases in Nigeria, reforms are essential to enhance forensic capabilities and ensure justice for victims.

81 (2000) 10 NWLR (Pt 674) 83 SC

82 Adebayo Oyeboode, 'The Role of Forensic Evidence in the Prosecution of Sexual Offences in Nigeria' (2020) 14(1) *Nigerian Law Journal* 45

83 Evidence Act 2011, s 68, 83, 84.

84 (2018) LPELR-44441(CA)

3.2 Nature and Scientific Basis of DNA Evidence

DNA is the hereditary material found in the nucleus of cells in almost every living organism. Each person's DNA is unique (except in identical twins), making it an invaluable tool for identification. In forensic science, DNA profiling involves the extraction, amplification, and comparison of DNA samples obtained from biological materials such as blood, semen, saliva, hair, skin cells, or other bodily fluids⁸⁵. When a suspect's DNA profile matches that recovered from a crime scene or a victim's body, it provides strong scientific proof of involvement in the crime.

Structurally, DNA consists of two elongated strands that create a double helix, which is formed from smaller components referred to as nucleotides. These nucleotides are comprised of four chemical bases: Adenine (A), Thymine (T), Cytosine (C), and Guanine (G). The arrangement and pairing of these bases establish a person's distinct genetic blueprint. Since this sequence is passed down and remains unchanged throughout an individual's life, it serves as a means of personal identification, much like a biological fingerprint.⁸⁶

In forensic science, DNA profiling or genetic fingerprinting is the process of analyzing these genetic sequences to identify individuals. The process begins with the collection of biological samples from a crime scene, a victim, or a suspect. After collection, the DNA is extracted from the samples and then amplified using a laboratory technique known as Polymerase Reaction (PCR). PCR allows even minute quantities of DNA to be multiplied for proper analysis. Scientists then examine specific regions of the DNA known as Short Tandem Repeats (STRs), these are the parts of DNA that vary the most between people⁸⁷. The resulting DNA profile is then compared to that of a suspect or database sample. The probability that two unrelated individuals will share the same DNA profile is extremely low, often less than one in a billion. Because of this near certainty, DNA evidence is regarded globally as one of the most dependable forms of

⁸⁵ Richard Li, *Forensic Biology: Biological Evidence in Criminal Investigations* (CRC Press 2016) 55

⁸⁶ Michael M Baden and Jan C Ballard, *Handbook of Forensic Pathology* (3rd edn, CRC Press 2012) 88

⁸⁷ Chuma Nwosu, 'The Scientific Basis and Application of DNA Profiling in Nigerian Courts' (2022) 16(3) *Journal of Forensic Science and Criminology* 120

forensic evidence⁸⁸. It can conclusively establish the presence of an accused person at a crime scene or confirm physical contact between an offender and a victim, as seen in cases of sexual assault.

In the context of sexual violence, DNA evidence plays a particularly crucial role. During or after an assault, biological materials such as semen, saliva, or hair may be left on the victim's body or clothing. When properly collected and preserved during medical examination, these materials can be analyzed to determine whether the DNA matches that of a suspect. This form of evidence often provides objective scientific support for the victim's testimony and strengthens the prosecution's case.

However, for DNA evidence to be admissible and credible in court, strict procedures must be followed. The integrity of the sample must be protected through a well documented chain of custody. Every stage from collection, storage, and transportation to laboratory analysis must be properly recorded. Any contamination, mislabeling, or mishandling can compromise the reliability of the results and lead to the evidence being rejected⁸⁹.

In Nigeria, the establishment of forensic facilities such as the Lagos State DNA and Forensic Centre (LSD&FC) has improved the use of DNA technology in criminal investigations, including sexual violence cases. These advancements have allowed investigators to scientifically link suspects to crimes and also exonerate those wrongly accused.

3.3 Legal Recognition of DNA Evidence in Nigerian Courts

While Nigeria does not have a specific statute exclusively governing DNA evidence, its admissibility and use fall under the general provisions of the Evidence Act 2011 (as amended):

Section 68 permits expert testimony on matters requiring scientific or specialized knowledge. A DNA expert or forensic analyst is thus recognized as a competent witness to interpret and explain laboratory findings⁹⁰. Section 49 of the evidence Act allows for the use of demonstrative or real evidence, including

⁸⁸Michael Lynch and Simon Cole, 'The Genealogy of DNA Identification and its Legal Acceptance' (2006) 3(1) *Annual Review of Law and Social Science* 98

⁸⁹ Scientific Working Group on Crime Scene Investigation (SWGCSI), Guidelines for the Management of Crime Scenes (US Department of Justice 2013) 21

⁹⁰ s 68 Evidence Act 2011

forensic analyses, to establish material facts. While section 84 supports the admissibility of electronically generated records, which includes computer based forensic reports.⁹¹

Therefore, once the prosecution can prove that the DNA sample was properly obtained, preserved, and analyzed, and that the chain of custody remains intact, the resulting evidence is admissible and carries substantial probative value in sexual offence trials.

3.4 Judicial Recognition and Case Law Development

Although Nigerian jurisprudence on DNA evidence in sexual violence cases is still developing, several judicial pronouncements have affirmed the admissibility and importance of scientific and medical evidence in such matters.

In *Benjamin v. State* The Court of Appeal underscored the importance of medical and scientific evidence, including DNA , in proving sexual assault cases. The court held that forensic evidence can strengthen the credibility of a victim's testimony and assist the court in identifying the true perpetrator⁹². Also in *Abdanalysisullahi v. State*, the court emphasized that medical or forensic evidence provides vital corroboration in rape cases where eyewitnesses are absent. This decision aligns with global best practices that rely on DNA profiling for confirmation of sexual contact.⁹³

Olayinka v. State , The Supreme Court acknowledged the increasing role of scientific proof in criminal adjudication, recognizing that advancements in forensic science can guide the court toward more accurate conclusions.⁹⁴

In *State v. Azeez* In this modern case handled with assistance from the Lagos State DNA and Forensic Centre (LSD&FC), DNA profiling was employed to confirm the presence of the accused's semen on the victim's clothing, leading to a conviction. This case marks one of the practical successes of DNA use in sexual violence prosecution in Nigeria.⁹⁵

⁹¹ s 49 & 84 Evidence act 2011

⁹² (2018) LPELR-44346(CA)

⁹³ (2015) LPELR-25928(CA)

⁹⁴ (2007) 9 NWLR (Pt. 1040) 561

⁹⁵ Ibid

3.5 Institutional Framework and Forensic Infrastructure

Nigeria has made notable progress in institutionalizing forensic DNA analysis through government and private initiatives. The establishment of the Lagos State DNA and Forensic Centre (LSD&FC) in 2017 marked a significant milestone. The centre provides services in forensic biology, sexual assault investigation, paternity testing, and crime scene analysis. It has assisted law enforcement agencies, especially the Nigeria Police Force, in gathering DNA-based evidence in rape and sexual assault cases.⁹⁶ Other institutions, such as the National Biotechnology Development Agency (NABDA), and some teaching hospitals with forensic units, also contribute to DNA testing and analysis. Despite these developments, the facilities are still limited in number and accessibility, especially outside major urban centres.

3.6 DNA Profiling and Genetic Identification in Sexual Violence Cases

DNA profiling involves analyzing biological samples such as semen, blood, saliva, hair, or skin cells to generate a genetic fingerprint unique to an individual⁹⁷. In sexual violence cases, DNA evidence is particularly valuable in identifying the assailant, confirming sexual contact, and establishing the identity of victims where necessary.

The collection and preservation of biological samples must follow strict forensic protocols to prevent contamination or degradation. Once extracted, the DNA profile of the suspect is compared to that obtained from the victim or the crime scene. A match provides powerful scientific corroboration of the victim's testimony and helps to overcome common evidentiary difficulties such as the lack of eyewitnesses or delayed reporting.⁹⁸

DNA profiling also assists in reviewing old or cold cases. When properly stored, biological evidence can be re-examined years later with improved techniques, potentially leading to convictions or exonerations. In cases of sexual violence, DNA profiling has become an invaluable tool in proving the occurrence of sexual contact and identifying the actual perpetrator of the offence.

⁹⁶Lagos State DNA and Forensic Centre, 'Official Website' <https://lsdfc.lg.gov.ng/> accessed 14 November 2025; Adebayo Oyeboode, 'The Role of Forensic Evidence in the Prosecution of Sexual Offences in Nigeria' (2020) 14(1) *Nigerian Law Journal* 45

⁹⁷ Richard Li, *Forensic Biology: Biological Evidence in Criminal Investigations* (CRC Press 2016) 55

⁹⁸ Adebayo Oyeboode, 'The Role of Forensic Evidence in the Prosecution of Sexual Offences in Nigeria' (2020) 14(1) *Nigerian Law Journal* 45

When a sexual assault occurs, the offender often leaves behind biological traces such as semen, saliva, hair, skin cells, or blood on the victim's body, clothing, or at the scene of the crime. During medical examinations usually conducted as soon as possible after the assault, these samples are carefully collected by trained medical practitioners. The samples are then sent to a forensic laboratory where scientists carry out the DNA profiling process.⁹⁹

If the DNA profile obtained from the crime scene matches that of a suspect, it provides very strong evidence that the suspect's biological material was found on or within the victim, thereby corroborating the victim's account of sexual contact. On the other hand, if the profiles do not match, the suspect can be excluded with high certainty. The accuracy of DNA profiling is so high that the probability of two unrelated persons having identical DNA profiles is estimated at less than one in a billion. This level of precision makes DNA evidence one of the most compelling forms of proof available in sexual violence prosecutions.¹⁰⁰

Beyond identification, DNA profiling also assists in establishing the absence of consent. In many sexual assault cases, the major dispute is not whether sexual intercourse occurred but whether it was consensual. When a victim's body or clothing contains the accused's semen or saliva, and the victim's DNA is also found on the accused, it confirms physical contact. Combined with other circumstantial and medical evidence, this helps the court assess credibility and intent.¹⁰¹

The Nigerian courts have gradually begun to admit DNA evidence as expert testimony, provided it meets the standards of relevance, authenticity, and proper chain of custody. In *Benjamin v. State* the Court of Appeal acknowledged the importance of scientific evidence, including DNA analysis, in establishing the link between an accused person and the offence¹⁰². Although the case did not solely hinge on DNA results, it reflected the judiciary's openness to forensic methods as credible proof in criminal trials.

99 Scientific Working Group on Crime Scene Investigation (SWGCSI), *Guidelines for the Management of Crime Scenes* (US Department of Justice 2013) 21

100 Michael Lynch and Simon Cole, 'The Genealogy of DNA Identification and its Legal Acceptance' (2006) 3(1) *Annual Review of Law and Social Science* 98

101 Adebayo Oyeboode, 'The Role of Forensic Evidence in the Prosecution of Sexual Offences in Nigeria' (2020) 14(1) *Nigerian Law Journal* 45

102 (2018) 7 NWLR (Pt. 1618) 197

However, the effectiveness of DNA profiling in sexual violence cases depends largely on proper evidence collection and preservation. If samples are not carefully handled, labelled, and stored, contamination may occur, rendering the results unreliable. Many police units in Nigeria still lack trained forensic personnel and adequate facilities for evidence preservation. These limitations have sometimes hindered the successful use of DNA evidence, despite its great potential.¹⁰³

Nevertheless, DNA profiling remains a major breakthrough in the fight against sexual violence. It bridges the gap between scientific objectivity and legal proof, giving victims a stronger voice and ensuring that justice is based on fact rather than speculation. By accurately linking offenders to their crimes and clearing the innocent, DNA profiling strengthens public confidence in the criminal justice system.

3.7 Medical examination and toxicological analysis in proving sexual violence cases

Medical examination plays a crucial role in the investigation and proof of sexual violence cases. It serves as the bridge between the legal and scientific aspects of justice by providing objective medical and forensic evidence that can support or refute the victim's account. When a case of sexual assault is reported, a prompt medical examination of the victim and sometimes the suspect is essential for accurate documentation, collection of biological samples, and evaluation of physical and psychological injuries.

The purpose of medical examination in sexual violence cases is threefold: first, to provide medical care and treatment to the victim; second, to collect and preserve physical and biological evidence for forensic analysis; and third, to document findings that may assist the court in determining the facts of the case¹⁰⁴.

During examination, medical practitioners carefully collect samples such as semen, vaginal swabs, saliva, hair, blood, and fingernail scrapings. These samples are vital for subsequent DNA and toxicological analyses. The medical officer also observes and records physical injuries like bruises, lacerations, bite marks, or signs of struggle, which can corroborate allegations of forced sexual contact.

The results of medical and toxicological examinations often carry significant evidential weight in court. A properly conducted examination can provide both direct and circumstantial evidence. For example, the

¹⁰³ Itse Sagay, *The Nigerian Law of Evidence* (2nd edn, Spectrum Books 2017) 210

¹⁰⁴ National Forensic Service Nigeria, 'Guidelines for the Recovery and Analysis of Ballistic Evidence in Sexual Assault Cases' (NFS Publication 2023) 15

presence of the accused's semen or DNA on the victim's body provides direct physical evidence of contact. Bruises, tears, or other genital injuries constitute circumstantial evidence that supports the allegation of non-consensual intercourse. In contrast, the absence of such findings does not automatically disprove the offence, as not all sexual assaults result in visible injuries, especially when the victim is threatened or subdued psychologically rather than physically.

In Nigeria, the role of medical evidence has been repeatedly emphasized in judicial decisions involving sexual offences. Courts have often relied on the testimony of medical experts to corroborate the complainant's narrative. In *State v. Aigboje*, the Court of Appeal reaffirmed that medical evidence, though not indispensable, greatly strengthens the prosecution's case where available¹⁰⁵. Similarly, in *Olayinka v. State* the Supreme Court noted that medical examination provides reliable scientific support for the testimony of the victim, especially in offences like rape, where corroboration is often required.¹⁰⁶

On the other hand Toxicological analysis refers to the scientific examination of body fluids and tissues to detect the presence of drugs, alcohol, or other chemical substances that may influence a person's physical or mental state. In sexual violence investigations, it plays a vital role in determining whether the victim was drugged, sedated, or intoxicated at the time of the assault, thereby helping to establish the absence of consent and the degree of the offender's culpability.

(i) Nature and purpose of toxicological Analysis

The central aim of toxicological analysis in sexual assault cases is to detect substances that could have been used to impair the victim's judgment, consciousness, or ability to resist. Offenders sometimes administer drugs or intoxicants covertly, for instance, by slipping them into a drink to make victims unconscious or disoriented. Such substances are often referred to as "date-rape drugs"¹⁰⁷. The detection of these substances through toxicological tests provides objective scientific proof that the victim's ability to give consent was

¹⁰⁵ (2019) LPELR-48179 (CA)

¹⁰⁶ (2007) 9 NWLR (Pt 1040) 561 (SC)

¹⁰⁷ Ibid

compromised. It also establishes a link between the timing of the assault and the victim's state of consciousness, making it harder for the defence to argue that the encounter was consensual.

(ii) Scientific process of toxicological analysis

There's also a scientific process, The process begins with the collection of biological samples from the victim as soon as possible after the assault. The type of sample taken depends on the time elapsed and the suspected substance. Common specimens include:

- Blood samples, which reveal recent drug or alcohol intake
- Urine samples, which retain traces of substances for longer periods (up to several days).
- Saliva or hair samples, which can be useful for detecting certain drugs over extended durations.

Once collected, these samples are sealed, labelled, and documented in line with the chain of custody principle to prevent contamination or tampering. In the laboratory, forensic toxicologists use advanced analytical techniques such as Gas Chromatography Mass Spectrometry (GC-MS) and High Performance Liquid Chromatography (HPLC) to identify and quantify the substances present. The results are then interpreted by an expert who explains their implications for the victim's mental and physical condition at the time of the offence.¹⁰⁸

(iii) Legal and Evidential Relevance

Toxicological findings often have a high probative value in court because they provide scientific confirmation of the victim's account. For example: If a victim testifies that she felt dizzy, confused, or unable to resist before losing consciousness, toxicological analysis can verify whether drugs like GHB or alcohol were indeed in her system.¹⁰⁹

The concentration levels of these substances can indicate whether they were taken voluntarily or administered surreptitiously. In cases involving minors or mentally incapacitated individuals, toxicological evidence helps prove exploitation through chemical inducement.

¹⁰⁸ Michael M Baden and Jan C Ballard, *Handbook of Forensic Pathology* (3rd edn, CRC Press 2012) 88

¹⁰⁹ *State v Aigboje* (2019) LPELR-48179 (CA)

Thus, toxicological results not only support the victim's testimony but also demonstrate mens rea (criminal intent), since the administration of incapacitating substances before an assault shows premeditation on the part of the offender.

3.8 Crime scene analysis and chain of custody principle

The crime scene is frequently described as the silent witness to an offense. In instances of sexual violence, it contains vital physical and biological evidence that can aid in reconstructing the sequence of events that led to the assault and in identifying the perpetrator¹¹⁰. Consequently, thorough crime scene analysis is a crucial component of forensic investigation, serving as the basis for all other types of evidence, such as DNA, trace, and toxicological results.

The investigation of sexual violence cases requires not only sensitivity and compassion toward victims but also scientific precision in evidence handling. One of the most critical aspects of any forensic investigation is crime scene analysis, which forms the foundation upon which all other forms of forensic evidence are built. It is often said that "every contact leaves a trace" a principle introduced by Edmond Locard, known as Locard's Exchange Principle¹¹¹. This idea means that whenever two objects come into contact, there is a mutual exchange of material. In the context of sexual violence, this principle becomes particularly relevant because physical and biological traces are often transferred between the victim, the offender, and the environment.

Crime scene analysis involves the careful identification, collection, and documentation of all possible forms of evidence that can help reconstruct what occurred during the assault. The importance of this process cannot be overstated, as even the smallest trace a strand of hair, a drop of blood, or a piece of torn fabric may hold the key to identifying the perpetrator or disproving false accusations. When properly examined, the crime scene "speaks," revealing hidden details about how the crime was committed, the sequence of events, and who was involved¹¹². In cases of sexual assault, the scene of the crime is not always limited to

¹¹⁰ Richard Li, *Forensic Biology: Biological Evidence in Criminal Investigations* (CRC Press 2016) 55

¹¹¹ Britannica, 'Locard's exchange principle' (nd) <https://www.britannica.com/science/Locards-exchange-principle>

¹¹² PE Bowen, *Forensic Evidence in Criminal Proceedings* (Sweet & Maxwell 2015) 45

one location. The assault may occur in one place, while evidence is transferred to another for example, the victim's home, clothing, or vehicle. Therefore, investigators must view the entire chain of events as a continuum, paying attention to all potential evidence sources. A failure to properly identify and process these areas can result in the loss of crucial information that might have established guilt or innocence beyond reasonable doubt.

3.9 The Nature and Importance of Crime Scene Analysis

Crime scene analysis involves the systematic examination, documentation, and collection of physical evidence from the location where the offence occurred. The goal is to identify, preserve, and interpret every material that can establish what happened, when it happened, and who was involved. In sexual violence cases, the crime scene may include not only the exact place where the assault took place (such as a bedroom, vehicle, or open area) but also any secondary locations where evidence might have been transferred, for example, the victim's home, clothing, or personal belongings.¹¹³ The key materials typically recovered during analysis includes clothing or sheets bearing semen stains, blood or saliva, hair strands or skin cells belonging to perpetrator or victim, weapons used to subdue victims even condom wrappers or lubricant residues.

Each of these items can hold biological or physical traces that link the offender to the crime when properly handled and examined. A well documented crime scene not only strengthens the credibility of forensic findings but also enhances the overall integrity of the criminal investigation.

3.10 Procedure for Crime Scene Management

The process of analyzing a crime scene typically follows a structured pattern:

(i) Securing the Scene:

The first responders, usually police officers, isolate the area to prevent contamination or interference by onlookers. This ensures that no evidence is destroyed or altered.

(ii) Documentation:

¹¹³ Richard Li, *Forensic Biology: Biological Evidence in Criminal Investigations* (CRC Press 2016) 55

Investigators take detailed photographs, sketches, and notes of the entire scene, recording the position and condition of every item of evidential value. These records become vital when presenting the case in court.

(iii) Evidence Collection:

Forensic officers, often in collaboration with medical experts, collect biological materials such as semen, blood, saliva, or hair samples. Each item is carefully packaged, labelled, and sealed to avoid contamination.

(iv) Laboratory Examination:

The evidence is subjected to scientific tests such as DNA profiling, toxicological screening, or microscopic examination to identify its source and relevance to the crime.¹¹⁴

Proper adherence to these steps ensures that the evidence retains its scientific value and can withstand scrutiny during trial.

3.11 The chain of custody principle

The chain of custody is a fundamental legal and procedural concept that ensures the integrity and admissibility of evidence¹¹⁵. It refers to the chronological documentation of every person who handled, transferred, examined, or stored an item of evidence from the time it was collected until it was presented in court. It is a meticulous record of who handled evidence from its collection to its final disposition, ensuring its integrity and authenticity. It requires a detailed, documented log of every person who had possession of an item, including the date, time, and place of transfer, to prevent tampering or contamination.

This principle serves two key purposes:

(i) Preservation of Integrity: It guarantees that the evidence presented in court is the same as that collected from the scene, without alteration, loss, or contamination.

(ii) Legal Accountability: It allows the defence and the court to verify that proper procedures were followed and that the evidence was not tampered with or fabricated. Every transfer of evidence must be accompanied by a written record indicating: The description of the item, The date, time and location of the collection, The identity and signature of the person collecting and receiving it and the conditions under which it was

¹¹⁴ Scientific Working Group on Crime Scene Investigation (SWGCSI), Guidelines for the Management of Crime Scenes (US Department of Justice 2013) 21

¹¹⁵ PE Bowen, Forensic Evidence in Criminal Proceedings (Sweet & Maxwell 2015) 45

stored or transported. Any break or irregularity in this chain can lead to questions about the reliability of the evidence, as courts may reject such evidence if it cannot be proven that it remained secure and uncontaminated throughout the process.

The Nigerian courts have consistently emphasized that for forensic evidence to be admissible, it must be properly authenticated. In *Ogundipe v. State*, the Court of Appeal noted that where the chain of custody is not clearly established, the credibility of scientific evidence may be questioned, even if the results appear conclusive.¹¹⁶

3.12 Challenges in the Nigerian Context

In Nigeria, crime scene management and evidence preservation face several difficulties:

- (i) Inadequate training of police and first responders in forensic procedures
- (ii) Poor coordination between law enforcement and forensic experts;
- (iii) Limited availability of forensic tools, storage facilities, and transportation systems
- (iv) Delay in evidence submission to laboratories, leading to degradation of biological materials

These challenges sometimes lead to loss or contamination of critical evidence, weakening the prosecution's case and contributing to low conviction rates in sexual offence trials.¹¹⁷

However, ongoing reforms, such as the creation of forensic departments within police commands and the operations of the Lagos State DNA and Forensic Centre (LSD&FC) have begun to improve evidence handling standards. Increased collaboration between medical examiners, forensic scientists, and law enforcement officials is also gradually strengthening the reliability of forensic evidence in Nigerian courts.

3.13 Trace and circumstantial forensic evidence in corroborating testimonies

Trace evidence refers to small, often microscopic materials transferred during the commission of a crime, this principle is grounded in Locard's exchange principle(1910) which posit that "every contact leaves a

¹¹⁶ (2018) LPELR-46777 (CA)

¹¹⁷ Adebayo Oyeboode, 'The Role of Forensic Evidence in the Prosecution of Sexual Offences in Nigeria' (2020) 14(1) *Nigerian Law Journal* 45

trace¹¹⁸. Such evidence includes hair, fibers, gun residues, paint fragments, soil, glass particles and biological residues (blood, saliva, semen or skin cells). According to Chisum and Turvey these traces serve as "silent witnesses" that can corroborate or contradict oral accounts.¹¹⁹

Trace and circumstantial forensic evidence is a very important tool for corroborating or repudiating testimonies by providing objective, physical facts that lend credibility, establish context and expose inconsistencies in witness or suspect statement.¹²⁰

Across the globe precisely in the criminal justice system, forensic evidence has become an essential pillar in making sure that trials and investigations are not entirely dependent on just human testimonies. The human memory unarguably can be flawed or even influenced by trauma, for this reason forensic science provides objective and dependable evidence that can corroborate or refute what witnesses, victims or suspects say.

3.14 Circumstantial forensic evidence

Refers to the indirect proof from which a fact may be inferred rather than directly observed. When supported by scientific findings, it becomes circumstantial forensic evidence. For instance where a forensic examination shows bruising consistent with forceful penetration or semen stains on the complainant's dress that matches that of the accused DNA, these findings form circumstantial proof pointing towards the occurrence of sexual assault.

The Nigerian supreme court in *Igho v. State* held that circumstantial evidence is enough to grant a conviction if it is cogent, complete and leads irresistibly to the guilt of the accused¹²¹. Hence, a well connected chain of forensic circumstances can be as decisive as direct eyewitness testimony.

Importance of trace and circumstantial forensic evidence in Nigeria

(i) Objective proof in the absence of an eyewitness In Nigerian criminal cases especially in sexual violence offences, these crimes may occur in private, leaving little or no direct eyewitness testimony.

¹¹⁸ Britannica, 'Locard's exchange principle' (nd) <https://www.britannica.com/science/Locards-exchange-principle> accessed 14 November 2025

¹¹⁹ Kimberley Taylor Chisum and Brent E Turvey, *Crime Scene Photography* (Academic Press 2011) 201

¹²⁰ PE Bowen, *Forensic Evidence in Criminal Proceedings* (Sweet & Maxwell 2015) 45

¹²¹ (1978) 3 SC 87

Trace and circumstantial forensic evidence provide scientific and objective proof that helps investigators and courts establish what actually occurred. Biological traces such as semen, saliva, or blood, and circumstantial indicators like injuries, torn clothing, or fingerprints, supply factual support that is independent of human perception or bias.

As observed in *Osayi v. State* medical and forensic findings were crucial in confirming the victim's account of rape despite a lack of eyewitnesses.¹²²

(ii)Corroboration of Testimonies in Sexual Offences

Nigerian courts are often cautious in convicting solely on a victim's testimony in sexual offences. Forensic evidence particularly DNA, medical, and trace analyses serves as corroborative evidence, strengthening the credibility of the complainant. In *Oforlete v. State* the Supreme Court stressed the desirability of independent corroboration in sexual offence cases.¹²³

When forensic analysis confirms that semen or DNA on a victim's clothing matches the accused, it objectively supports the victim's version of events and rebuts defences such as consent or mistaken identity.

(iii)Linking Suspects to Crime Scenes

Trace evidence like hair, fibers, fingerprints, or bodily fluids can link a suspect directly to a crime scene or victim. This scientific connection helps law enforcement establish chains of interaction that would otherwise be based on speculation. According to Locard's Exchange Principle "every contact leaves a trace" forensic experts can reconstruct crime scenes by identifying microscopic transfers between the offender and victim¹²⁴

(iv) Enhancing Reliability and Reducing Wrongful Convictions

¹²² (1998) 8 NWLR (Pt 561) 296

¹²³ (2000) 12 NWLR (Pt.681) 415

¹²⁴ Richard Saferstein, *Forensic Science: From the Crime Scene to the Crime Lab* (3rd edn, Pearson 2015) 12; Britannica, 'Locard's exchange principle' (nd) <https://www.britannica.com/science/Locards-exchange-principle> accessed 14 November 2025

By grounding findings in measurable science, forensic evidence improves the accuracy of convictions and minimizes miscarriages of justice. Trace and circumstantial evidence reduce reliance on inconsistent or coerced confessions, which have historically been problematic in Nigeria's criminal investigations.¹²⁵

(v) Strengthening Judicial Confidence and Modernizing Justice

Forensic evidence demonstrates the evolution of Nigeria's criminal justice system from subjective to scientifically driven adjudication. Courts now increasingly rely on forensic experts under Section 68 and 70 of the Evidence Act, 2011¹²⁶, which allow for expert opinions in technical and scientific matters. This builds public confidence in judicial outcomes and promotes transparency in prosecutions.

(vi) Deterrence and Public Confidence in the Criminal Justice System

When offenders are convicted through incontrovertible scientific proof, it enhances deterrence and public trust in the justice system. The public perceives forensic based convictions as credible, fair, and insulated from corruption or manipulation a vital factor in restoring faith in Nigeria's criminal justice process.¹²⁷

¹²⁵ Funmi Adewunmi, 'Rethinking Evidence Admissibility in the Nigerian Criminal Justice System: The Forensic Imperative' (2021) 5(2) *Journal of Criminal Law and Practice* 89, 92

¹²⁶ Ibid

¹²⁷ Adebayo Oyeboade, 'The Role of Forensic Evidence in the Prosecution of Sexual Offences in Nigeria' (2020) 14(1) *Nigerian Law Journal*, 170-191.

CHAPTER FOUR:

CHALLENGES AND PROSPECTS OF FORENSIC EVIDENCE IN SEXUAL VIOLENCE CASES IN NIGERIA

Sexual violence is one of the most prevalent yet underreported crimes in Nigeria. It cuts across economic, social and religious boundaries, leaving victims traumatized and most times without any form of justice¹²⁸. Despite the availability of several legal frameworks such as the criminal code act, penal code act and the Violence Against Persons (Prohibition) Act 2015, prosecution of sexual offences remains fraught with evidentiary difficulties¹²⁹. Traditionally, Nigerian courts have relied on direct testimony and confessional statements both of which are often unreliable or difficult to obtain in cases of sexual assault that typically occur in private setting.¹³⁰

In modern criminal jurisprudence, forensic evidence that is scientific and technical evidence derived from methods such as DNA analysis, toxicology, fingerprinting and trace material examination plays a crucial role in identifying offenders, corroborating victims accounts and strengthening the evidential chain.¹³¹ Unfortunately, in Nigeria the potential of forensic science in promoting justice in sexual violence cases has not been fully realized. This is due to numerous challenges including poor infrastructure, inadequate training, weak legal frameworks and cultural stigmatization as well as many other factors¹³², before the challenges and prospects of forensic evidence in sexual violence offences in Nigeria are examined, one ought to consider the legal framework surrounding the corroboration of forensic evidence in sexual violence particularly in Nigeria thus:

128 M. M. Oti, "Challenges in the Prosecution of Sexual Offences in Nigeria: The Evidentiary Dilemma", *Journal of Law and Criminal Justice*, Vol. 7, No. 1, 2019, p. 45

129 A.O. Popoola, *Criminal Law in Nigeria*, 2nd edn, Spectrum Books, Ibadan, 2018, p. 112

130 E. E. Ogbu, *Principles of Evidence in Nigeria*, Sweet & Maxwell, Lagos, 2016, p. 210

131 B. C. Ozumba, "The Role of Forensic Evidence in Adjudicating Sexual Offences in Nigeria", *University of Lagos Law Review*, Vol. 15, 2021, p. 89

132 O. S. Ojo, "Corroboration in Sexual Assault Cases: The Nigerian Judicial Perspective", *Nigerian Bar Association Journal*, available at:

<https://www.nba.org.ng/journal/corroboration-in-sexual-assault-cases>, accessed 24 November 2025

4.1 Legal framework on corroboration of forensic evidence in sexual offences in Nigeria

The legal framework on corroboration of forensic evidence in sexual violence offences in Nigeria simply connotes the set of law, regulations and judicial principles that governs how scientific evidence can be used to support or strength a victims testimony in sexual offences cases.¹³³

Statutory Framework

The statutory framework that governs corroboration and also the admissibility of forensic evidence is provided by the Evidence act 2011, as well as the criminal code, penal code and the violence against persons (prohibition) act 2015 .These acts can infact be said to be responsible for the law surrounding evidence and it's Corroboration. The Evidence act for one, does not impose any legal requirement that sexual offences must be corroborated, in fact section 134 expressly provides that "No particular number of witnesses is required to prove a fact"¹³⁴. This therefore means that, legally, the testimony of a victim of rape or if sexual assault can be sufficient on its own to proof just matter. However, because sexual offences often occur in private without eyewitness, the court tends to favour objective supporting evidenced, particularly medical and forensic findings to strengthen the credibility and avoid wrongful convictions.¹³⁵

The act further provides for the admission of expert evidence, this can be seen under section 67-68 of the act, here, persons with specialized training and expertise can tender evidences to proof or disproof facts¹³⁶. These could medical doctors, forensic scientists, DNA analysts, psychologist and laboratory personnel etc, they're competent to tender expert opinions on matters that requires scienthc or technical knowledge. This makes forensic analysis fully admisdible under the Nigerian law.

In addition, the evidence act emphasis that evidence must be relevant in other to be admissible (s1 of the evidence act 2011). Forensic evidence is naturally relevant in sexual offence because it helps to establish central elements such as penetration, force, bodily injuries, presence of semen and the identification of perpetrator. Section 135-137 deals with the Burden and also the standard of proof, which further shows the

133 O. Anya, *Legal Methods and Principles in Nigerian Law*, 3rd edn, Princeton Publishers, Abuja, 2020, p. 150

134 s134 Evidence act 2011

135 R. U. Nnabue, "Judicial Attitudes Towards Uncorroborated Sexual Assault Testimony in Nigeria", *African Journal of Law and Criminology*, Vol. 10, No. 2, 2022, p. 25

136 s67-68 Evidence act 2011

role of forensic evidence in assisting the prosecution to meet the standard of proof beyond reasonable doubt¹³⁷. Other statutory instruments that also supports the use of forensic documentations in the Nigeria legal system includes the criminal and penal codes respectively, they define sexual offences in a way that physical proof such as injury, bodily fluids or biological traces is important¹³⁸, the violence against persons (prohibition) act (Vappa) on the other hand encourages proper medical documentation of injuries and patterns of violence, which makes forensic evidence even more significant in sexual violence offences covered by the act.¹³⁹

Procedurally, the admissibility of forensic evidence is supported by the principles of chain of custody, which ensures that samples collected from a victim or a crime scene are properly handled, sealed, labelled, stored and rightly transmitted. Although not contained in a single provision, chain of custody requirements can be said to arise from section 83-84 of the evidence act (authenticity and electronic evidence) and from the common law evidential safeguards¹⁴⁰. A broken chain of custody may weaken or even destroy the credibility of forensic evidence

4.2 Judicial Approach to Corroboration in Sexual Violence Offences in Nigeria

In Nigeria, the courts have taken a practical and cautious approach towards corroboration in sexual violence cases. While the Evidence Act 2011 does not require strict corroboration of a victim's testimony, judges have consistently emphasized the importance of supporting evidence, especially in cases where there are no eyewitnesses. This supporting evidence often comes in the form of medical and forensic findings, such as injuries consistent with assault, semen or DNA evidence, and other forensic reports.¹⁴¹

The courts recognize that sexual offences often occur in private, making direct proof difficult. Therefore, judicial practice has evolved to treat forensic evidence as corroborative rather than mandatory. For

137 B. M. Alkali, "The Standard and Burden of Proof in Sexual Offences: The Role of Forensic Science", *Journal of Nigerian Law*, Vol. 25, 2020, p. 115

138 Criminal Code Act, Cap C38, LFN 2004, s 357; Penal Code Act, Cap P3, LFN 2004, s 282

139 Violence Against Persons (Prohibition) Act 2015, s 24, P. I. Nowak, "Legislating Against Violence: A Commentary on the VAPP Act", *Nigerian Legal Studies Journal*, Vol. 3, 2017, p. 55

140 A. C. Nwapa, "The Chain of Custody Rule and Admissibility of Forensic Evidence in Nigeria: A Critical Appraisal", *Journal of Forensic Science & Criminal Investigation*, Vol. 12, No. 3, 2023, p. 7

141 Y. Akinseye-George, *Law of Evidence in Nigeria: Cases and Materials*, Revised edn, Malthouse Press, Lagos, 2019, p. 305

instance ,in *State v Aigboje*, the Court of Appeal relied on the medical report to confirm the victim's account, even though there were no other witnesses¹⁴². Similarly, in *Osayi v State*, medical and forensic findings were treated as strong corroboration of the victim's testimony, highlighting that such evidence can bolster the credibility of the complainant without being the sole basis for conviction.¹⁴³

Judges also pay attention to the quality and reliability of forensic evidence. They examine whether the samples were properly collected, whether the chain of custody was maintained, and whether the expert providing the report is qualified. Evidence that meets these standards is given considerable weight, while evidence that is flawed or incomplete may be treated with caution.¹⁴⁴

With reference to the introductory body of this work, the challenges and prospects of forensic evidence in sexual violence offences reveal the complex realities surrounding the use of scientific proof in Nigeria's criminal justice system. The ineffectiveness of forensic evidence is shaped by structural, technical, and procedural limitations that often affect its reliability and availability. Yet, the growing acknowledgement of its value points toward meaningful prospects for reform, improved investigative standards, and stronger evidentiary outcomes¹⁴⁵. These challenges are examined below:

4.3 Evidentiary and procedural challenges in the admissibility of forensic evidence

With regards to the modern criminal proceedings, forensic science has undeniably become a vital instrument in the pursuit of justice¹⁴⁶. It offers both objective and scientific foundations for establishing or refuting debatable facts, moving away from the conventional dependence on eyewitness accounts and confessions. Forensic evidence encompasses a diverse array of scientific techniques, including DNA profiling, fingerprint analysis, ballistic and toxicological evaluations, handwriting and document scrutiny, as well as digital forensics¹⁴⁷. If these techniques are rightly utilized law enforcement and judicial systems

142 (2019) 4 NWLR (Pt 1663) 145 CA

143 (2019) LPELR-48843 (CA)

144 S. A. Musa, "Judicial Scrutiny of Forensic Evidence in Nigerian Courts: Ensuring Reliability", *Ibadan Bar Journal*, available at: <https://www.ibadanbar.org/journal/judicial-scrutiny-forensic-evidence>, accessed 26 November 2025

145 O. Ikeazor, "The State of Forensic Science in Nigerian Criminal Justice", *Law Practice Journal*, Vol. 45, 2020, p. 22.

146 S. E. Abang, *Forensic Evidence and Criminal Prosecution in Nigeria*, University of Nigeria Press, Enugu, 2019, p. 34

147 R. Ifemeje, "Techniques of Forensic Investigation: An Overview", *Journal of Law and Science*, Vol. 8, No. 2, 2021, p. 110

can identify perpetrators, clear the innocent, and lend credibility to otherwise ambiguous testimonies. However, in Nigeria, the potential of forensic evidence is frequently compromised by procedural and evidentiary obstacles.

The evidentiary challenges in the admissibility of forensic evidence are examined below:

(i) Relevance, Materiality and probative value

In Nigeria, the courts requires that all evidences including scientific materials, must be relevant to a fact in issue in accordance to section 1,4 and 7 of the Evidence act 2011¹⁴⁸. The court in *Adeleke v. State* reaffirmed that relevance is the touchstone of admissibility, noting that once evidence is relevant to the facts in issue, it is admissible irrespective of how it was obtained unless a specific exclusionary rule applies¹⁴⁹. In forensic contexts, this means that as long as the scientific analysis relates to a fact that aids the resolution of the case (such as the identity of the perpetrator, cause of death, or presence of a controlled substance), the evidence passes the test of relevance. In sexual violence offences, the major facts in issues usually involves penetration, identity of the perpetrator and non consent. The forensic evidence therefore must directly be relevant in establishing one of these elements.

Major challenges arises when forensic results are contaminated, inconclusive or obtained after a significant time lapse. Many victims report late due to shame, stigma or fear of reprisal and this delay erodes the probative value of biological samples as semen may degrade, injuries sustained may be healed and DNA may be lost. When this occurs the courts struggle with whether such diminished results are sufficiently material to warrant admissibility, or whether their limited probative force would mislead rather than assist the court.¹⁵⁰

(ii) Chain of Custody

Chain of custody is undeniably one of the critical admissibility problems in sexual violence cases particularly in Nigeria. Forensic evidence like biological samples such as saliva, epithelial cells, blood etc is

¹⁴⁸ s 1,4 & 7 Evidence act 2011

¹⁴⁹ (1987) NWLR (Pt 56) 244

¹⁵⁰ N. A. Audu, "Temporal Challenges in Forensic Evidence Collection for Sexual Assault Cases in Nigeria", *African Journal of Evidence Law*, Vol. 14, 2022, p. 78

highly sensitive to contamination and requires extreme carefulness from its collection to analysis. Nigeria's chain of custody problems are chronic, in the sense that hospitals frequently lack reor kits or proper evidence collection materials¹⁵¹. Police officers often have no training in biological evidence handling which results to unsealed or improperly labelled exhibits, also transfers between various units of the police force may be undocumented, while delays in delivery of such samples to the laboratory allow degradation. When a link to the chain is missing, the court becomes reluctant to accept such evidence, even when admitted it often carries little evidentiary weight¹⁵², as seen in *FRN v. Fani-Kayode*, where the court highlighted that every piece of evidence must be traceable from the moment of recovery to its presentation in court.¹⁵³

(iii) Qualification and credibility of experts

The admissibility of expert testimony is further obstructed when the expert does not have verifiable qualifications, accreditation, or professional autonomy. Courts necessitate evidence that the expert has the necessary scientific expertise and that their opinion is grounded in recognized scientific methodologies. Akinseye-George, comments on Section 68 of the Evidence Act, noting that Nigerian courts demand not only the expert's qualification but also proof that the methods used are scientifically validated.¹⁵⁴ In *Okoro v. The State*, the Supreme Court determined that an expert's testimony must be supported by rationale and methodology; failing this, it holds minimal or no significance.¹⁵⁵

(iv) Contamination and Preservation of Evidence

Poor evidence handling from collection to laboratory analysis often leads to contamination. Biological evidence (such as semen, saliva, or blood) is particularly susceptible to environmental degradation in tropical climates like Nigeria's. The absence of cold storage facilities, tamper proof packaging, and

¹⁵¹ Human Rights Watch, "Justice on Trial: Forensic Evidence and Sexual Assault in Nigeria", HRW Press, New York, 2021, p. 15

¹⁵² E. E. Ogbu, *Principles of Evidence in Nigeria*, Sweet & Maxwell, Lagos, 2016, p. 245

¹⁵³ (2021) 1 NWLR (Pt 1758) 456 CA.

¹⁵⁴ Y. Akinseye-George, *Law of Evidence in Nigeria: Cases and Materials*, Revised edn, Malthouse Press, Lagos, 2021, p. 289

¹⁵⁵ (1988) 5 NWLR (Pt 94) 255 SC

standardized forensic protocols frequently compromises evidence integrity.¹⁵⁶ In *Iko v. The State* the Supreme Court cautioned that evidence obtained through doubtful or tainted procedures should not be relied upon to convict an accused.¹⁵⁷

4.4 Procedural challenges in the admissibility of forensic evidence

(i) Absence of Standardized Collection and Preservation Procedures

A significant procedural challenge is the lack of standardized protocols for the collection, storage, and transmission of forensic evidence in investigations of sexual offenses. According to the UNODC and EU-Nigeria Partnership Report, Nigerian police officers, medical professionals, and forensic analysts do not possess clear procedural guidelines that align with international "chain of custody" standards¹⁵⁸. In instances of rape, biological specimens such as semen, vaginal swabs, and blood samples are frequently gathered without appropriate labeling, sealing, or refrigeration.

This procedural deficiency leads to contamination or degradation of evidence, which jeopardizes its admissibility under Section 83(1)(b) of the Evidence Act, 2011, stipulating that documents and reports must be presented in their original, unaltered state. In the case of *Iko v. The State*, the Supreme Court cautioned that evidence acquired through improper handling or unreliable scientific methods should not be used as a basis for conviction. When this principle is applied to cases of sexual violence, it implies that DNA reports or toxicological evaluations derived from inadequately stored samples can be effectively contested by the defense as inadmissible or unreliable.

Adebayo notes that forensic evidence from sexual assault investigations is often rejected because procedural missteps such as delays in submitting samples or failure to maintain cold chain storage cast doubt on their authenticity¹⁵⁹. NAPTIP and Mirabel Centre (2021) similarly reported that many rape kits in Nigeria become legally useless due to procedural failures in evidence preservation.¹⁶⁰

156 N. A. Audu, "Temporal Challenges in Forensic Evidence Collection for Sexual Assault Cases in Nigeria", *African Journal of Evidence Law*, Vol. 14, 2022, p. 81

157 (2001) 14 NWLR (Pt 732) 221 SC

158 United Nations Office on Drugs and Crime (UNODC) and EU-Nigeria Partnership, Report on Forensic Standards and Procedures in Nigeria, Abuja, 2020, p. 30

159 J. Adebayo, "Admissibility of Forensic Evidence in Sexual Assault Trials: A Critical Analysis", *Nigerian Law Review*, Vol. 40, No. 1, 2020, p. 110

160 National Agency for the Prohibition of Trafficking in Persons (NAPTIP) & Mirabel Centre, Joint Report on the Status of Sexual Assault Evidence in Nigeria, Lagos, 2021, p. 8

(ii) Delay and Procedural Mismanagement in Evidence Processing

Procedural delay represents a significant systemic barrier. According to NHRC (2020) and NAPTIP (2021), the analysis of biological samples from sexual assault victims can take months or even years to complete, during which time degradation of the samples may occur¹⁶¹. As stipulated in Section 135(1) of the Evidence Act, it is the responsibility of the prosecution to establish its case beyond a reasonable doubt. When there are delays in obtaining forensic evidence, the defense frequently takes advantage of inconsistencies or absent reports to undermine the prosecution's case.¹⁶²

For example, it is essential that a victim's medical examination report is generated concurrently with the assault to demonstrate causation. Any procedural mismanagement in this regard diminishes the probative value of the evidence, as courts have determined that excessive delays can compromise the credibility of scientific evidence as illustrated in *Iko v. State* (supra), also Okonkwo and Naish observe that the Nigerian criminal justice system suffers from procedural inertia, which undermines the evidentiary function of forensic science particularly in sexual offense cases where timely DNA or toxicology analysis is vital.¹⁶³

(iii) Expert Certification and Procedural Qualification

The admissibility of forensic evidence also depends on proper expert qualification and certification under Section 68 of the Evidence Act, 2011. Procedurally, the expert who conducted the examination must tender the report in person and demonstrate their competence and methodology. In sexual violence cases, however, this procedural requirement is frequently violated.

Akinseye-George observes that forensic analyses in Nigeria are often conducted by medical practitioners or police officers who, although experienced, lack formal certification in forensic science. As a result, their testimonies are challenged and sometimes excluded¹⁶⁴. In *Eze v. State*, a medical report was rejected

¹⁶¹ National Human Rights Commission (NHRC), Annual Report on Sexual and Gender-Based Violence, Abuja, 2020, p. 45; NAPTIP & Mirabel Centre, *ibid*, p. 12

¹⁶² s 135 (1) Evidence act 2011

¹⁶³ C. Okonkwo and C. Naish, "Procedural Inertia in the Nigerian Criminal Justice System: Implications for Forensic Science", *International Journal of Forensic Science*, Vol. 33, 2019, p. 55

¹⁶⁴ Y. Akinseye-George, *op. cit.*, p. 291

because it was tendered through a police officer rather than the doctor who performed the examination, a clear breach of procedural requirements.¹⁶⁵

Similarly, Adebayo argues that procedural irregularities in the tendering of forensic reports, especially in sexual violence cases, stem from the non-availability of qualified forensic pathologists and the tendency to rely on hearsay reports rather than direct expert testimony. This procedural lapse often leaves the prosecution without admissible scientific evidence, thereby weakening its case.

4.5 Institutional and Infrastructural constraint in forensic evidence

The Nigerian legal framework, which is based on the adversarial system, relies heavily on the quality of the evidence presented. However, the investigative and judicial bodies frequently lack the necessary resources, coordination, and technical expertise to manage forensic issues effectively. Recognizing these obstacles is vital for advocating systemic reforms and enhancing evidentiary standards within the criminal justice system.

These challenges are fundamentally entrenched in Nigeria's historical disregard for scientific progress in criminal investigations. In contrast to developed jurisdictions where forensic laboratories are seamlessly integrated into police and prosecutorial systems, Nigeria continues to function with a disjointed and antiquated framework¹⁶⁶. For example, although the Nigerian Police established a Forensic Science Laboratory at Alagbon Close, Lagos, many years ago, its facilities remain predominantly outdated and unable to satisfy contemporary investigative requirements¹⁶⁷. The majority of states entirely lack forensic facilities, compelling investigators to send vital samples overseas for analysis, a procedure that is not only time consuming and expensive but also susceptible to tampering or loss of the chain of custody¹⁶⁸. These

¹⁶⁵ (1976) 1 SC 93

¹⁶⁶ J. Adebayo, "Admissibility of Forensic Evidence in Sexual Assault Trials: A Critical Analysis", *Nigerian Law Review*, Vol. 40, No. 1, 2020, p. 112

¹⁶⁷ Human Rights Watch, "Criminal Chaos: Torture, Death Sentences, and Fair Trials in Nigeria", HRW Press, New York, 2018, p. 21

¹⁶⁸ A. C. Nwapa, "The Chain of Custody Rule and Admissibility of Forensic Evidence in Nigeria: A Critical Appraisal", *Journal of Forensic Science & Criminal Investigation*, Vol. 12, No. 3, 2023, p. 9

shortcomings hinder effective evidence collection, analysis, and admissibility, ultimately undermining justice delivery and some of these constraints are examined below.¹⁶⁹

(i) Inefficiency of the Nigerian Police Force and Investigative Agencies

The Nigerian Police Force holds the main duty of conducting criminal investigations, yet it frequently employs antiquated techniques and possesses limited forensic capabilities. Investigators predominantly depend on confessions instead of scientific proof¹⁷⁰. For example, in the case of *State v. Aigbokhan* the court highlighted the necessity of thorough investigations and reliable evidence for achieving a conviction. However, numerous investigations suffer from inadequate evidence gathering and improper handling of exhibits, which ultimately leads to the exclusion of forensic evidence.¹⁷¹

(ii) Absence of Specialized Forensic Units

Nigeria does not possess a centralized and specialized national forensic agency. Although the Nigeria Police operates a Forensic Science Laboratory located in Alagbon, Lagos, along with several facilities in Abuja and Port Harcourt, these resources are significantly underfunded and underutilized¹⁷². This deficiency in institutional capacity results in a heavy reliance on foreign laboratories for DNA and toxicological analyses, consequently delaying the administration of justice and raising concerns regarding the integrity of the evidentiary chain of custody.

(iii) Inadequate Training and Expertise

A significant institutional weakness is the absence of adequately trained forensic experts and investigators who possess knowledge regarding the preservation and analysis of evidence. Numerous law enforcement personnel lack familiarity with the proper protocols for managing biological samples or ensuring the integrity of the chain of custody. In the case of *Oche v. State* the court observed that procedural mistakes in

169 R. Ifemeje, "Techniques of Forensic Investigation: An Overview", *Journal of Law and Science*, Vol. 8, No. 2, 2021, p. 115

170 Y. Akinseye-George, *Law of Evidence in Nigeria: Cases and Materials*, Revised edn, Malthouse Press, Lagos, 2021, p. 310

171 (2018) JELR 44514 (CA)

172 United Nations Office on Drugs and Crime (UNODC) and EU-Nigeria Partnership, *Report on Forensic Standards and Procedures in Nigeria*, Abuja, 2020, p. 35

the handling of evidence could lead to the exclusion of evidence that would otherwise be considered relevant.¹⁷³

4.6 Infrastructural constraint in forensic evidence in Nigeria

infrastructural constraints refer to the lack of modern forensic laboratories, and equipments for the effective and efficient carrying out of forensic activities, in the context of sexual violence offences in Nigeria it simply refers to the lack of modern forensic laboratories ,rape kits, and DNA testing facilities needed to collect and analyze biological evidence such as semen, saliva, and blood.

(i) Inadequate Forensic Laboratories

Nigeria's ability to conduct forensic analysis is severely hindered by the lack of resources and the inadequate state of its forensic laboratories. The Nigeria Police Force manages a Forensic Science Laboratory located in Alagbon, Lagos, as well as another facility at the Force Criminal Investigation Department (FCID) in Abuja. Nevertheless, these laboratories are significantly under resourced, poorly maintained, and fail to comply with international standards for DNA, serological, or toxicological testing.¹⁷⁴ In the majority of sexual violence cases, biological evidence such as semen, vaginal secretions, or blood is often left untested or is sent overseas for analysis, which leads to considerable delays and increases the risk of contamination. In the case of *Oche v. State* the Court of Appeal highlighted the importance of maintaining procedural integrity in the collection and presentation of evidence, indicating that any deviation from proper procedures could invalidate otherwise reliable forensic evidence. This deficiency in infrastructure complicates the ability of prosecutors to provide scientifically substantiated evidence, resulting in a heavy reliance on confessions and victim testimonies, which may not fulfill the evidentiary standards required in criminal proceedings.

(ii) Absence of Standard Rape Kits and Forensic Medical Tools

Another critical infrastructural shortfall lies in the lack of standard sexual assault examination kits, commonly known as rape kits, in hospitals and police stations. These kits are vital for collecting and

¹⁷³ (2007) 5 NWLR (Pt 1027) 224 CA

¹⁷⁴ National Agency for the Prohibition of Trafficking in Persons (NAPTIP) & Mirabel Centre, Joint Report on the Status of Sexual Assault Evidence in Nigeria, Lagos, 2021, p. 10

preserving biological materials such as semen, blood, and saliva immediately after an assault. The United Nations Office on Drugs and Crime (UNODC) in its report “Strengthening Forensic Services and the Criminal Justice Chain in Nigeria” revealed that most Nigerian hospitals still rely on improvised tools, resulting in contamination and loss of valuable DNA evidence¹⁷⁵. This issue was highlighted in *State v. Aigbokhan* where the court stressed the need for proper handling and documentation of physical exhibits to preserve evidential integrity¹⁷⁶. NAPTIP and UNODO, in their guidelines also underscored that the absence of rape kits has significantly impeded successful prosecution of rape offenders.¹⁷⁷

(iii) Poor Preservation and Storage Facilities

Even when evidence is gathered, inadequate storage and preservation continue to pose significant challenges. Biological materials, if not kept refrigerated or properly sealed, deteriorate rapidly, making them scientifically ineffective. Okonkwo (2015), in his work “Introduction to Nigerian Criminal Law,” observed that numerous police divisions maintain forensic samples in inappropriate conditions, thereby undermining their evidential worth¹⁷⁸. The Evidence Act 2011 (as amended) stipulates in Sections 67–71 that the integrity and authenticity of evidence must be established; however, many forensic samples do not meet this criterion due to substandard storage. In the case of *FRN v. Fani-Kayode* highlighted that inadequate documentation and preservation can result in the exclusion of evidence.¹⁷⁹

(iv) Lack of Collaboration Between Institutions

Effective forensic investigation requires synergy between police, health institutions, laboratories, and the judiciary. However, the lack of a coordinated framework and inter-agency collaboration leads to duplication, loss of evidence, and procedural lapses. In sexual violence cases, for instance, forensic medical

¹⁷⁵ United Nations Office on Drugs and Crime (UNODC), *Strengthening Forensic Services and the Criminal Justice Chain in Nigeria*, Abuja, 2022, p. 18

¹⁷⁶ (2018) JELR 44514 (CA)

¹⁷⁷ National Agency for the Prohibition of Trafficking in Persons (NAPTIP) & UNODC, *Guidelines for the Management of Sexual and Gender-Based Violence Cases in Nigeria*, Abuja, 2021, p. 25

¹⁷⁸ C. Okonkwo, *Introduction to Nigerian Criminal Law*, 2nd edn, Spectrum Books, Ibadan, 2015, p. 142

¹⁷⁹ (2021) 1 NWLR (Pt 1758) 456 CA

examinations are often poorly coordinated between hospitals and investigative bodies, leading to evidentiary gaps.¹⁸⁰

(v) Ineffective Data Management and Record Systems

The absence of a centralized national database for DNA profiles, fingerprints, or criminal records significantly impedes the capacity to correlate evidence across different jurisdictions or to identify serial offenders. In contrast, nations such as South Africa and the United Kingdom maintain national DNA databases that facilitate efficient crime resolution, thereby underscoring Nigeria's infrastructural deficiencies.¹⁸¹

4.7 Socio-Cultural barriers and victim related challenges

The efficient application of forensic evidence in cases of sexual violence in Nigeria is frequently obstructed by a variety of socio cultural and victim-related obstacles. These challenges are fundamentally entrenched in Nigeria's societal norms, traditional beliefs, religious sentiments, and systemic deficiencies, which together dissuade the reporting, investigation, and prosecution of these crimes.

Socio-cultural barriers encompass the social beliefs, traditional practices, norms, and cultural attitudes prevalent within a society that obstruct individuals particularly those who have experienced sexual violence from reporting offenses, pursuing justice, or obtaining forensic and medical assistance. These barriers are not physical or legal in nature, instead, they manifest as behavioral, psychological, and societal limitations that stem from societal perceptions of gender, sexuality, morality, and honor.

In the realm of sexual violence offenses, socio-cultural barriers represent the shared beliefs and customs that:

- Discourage victims from coming forward or reporting incidents of rape and sexual assault.
- Encourage victim-blaming and shaming.
- Place greater importance on family honor or community reputation than on justice.
- Regard sexual issues as private, taboo, or inappropriate for public discussion.

180 N. A. Audu, "Temporal Challenges in Forensic Evidence Collection for Sexual Assault Cases in Nigeria", *African Journal of Evidence Law*, Vol. 14, 2022, p. 83

181 J. Adebayo, "Admissibility of Forensic Evidence in Sexual Assault Trials: A Critical Analysis", *Nigerian Law Review*, Vol. 40, No. 1, 2020, p. 114

As articulated by Okagbue in *Sexual Violence and the Law in Nigeria*, these barriers are deeply entrenched in patriarchal traditions and moral conservatism, which foster silence and complicity in instances of sexual abuse. These barriers includes:

(i) Stigmatization of victims

One of the most significant socio-cultural obstacles is the societal stigmatization faced by victims of sexual violence. These individuals frequently endure shame, mockery, and blame, particularly in patriarchal societies where virginity and chastity are held in high esteem. This stigma serves as a deterrent for victims, preventing them from reporting crimes or engaging with forensic processes such as medical examinations or DNA collection¹⁸². Stigmatization and victim blaming constitute two of the most entrenched socio-cultural impediments to justice for victims of sexual violence in Nigeria. These barriers not only silence victims but also directly obstruct the gathering, preservation, and admissibility of forensic evidence, thereby undermining the integrity of sexual offence prosecutions. Stigmatization is one of the most severe socio-cultural obstacles. Victims frequently find themselves labeled as "spoilt," "immoral," or "attention seekers." Such social ostracism discourages them from reporting incidents in a timely manner or undergoing forensic examinations both of which are essential for the preservation of evidence. Goffman (1963) characterizes stigma as a trait that undermines an individual's social identity, a definition that resonates with the experiences of sexual violence survivors in Nigeria.¹⁸³

Ogunleye in his work elucidates that stigma is evident not only in social contexts but also within institutions manifesting through police mockery, unempathetic medical personnel, and court interrogations that further traumatize victims¹⁸⁴. Consequently, there is a hesitance to engage in forensic procedures, resulting in insufficient or nonexistent evidence. The judiciary's acknowledgment of this issue is reflected in *Posu &*

182 T. Okagbue, *Sexual Violence and the Law in Nigeria*, Civilian Publishing, Lagos, 1996, p. 45

183 E. Goffman, *Stigma: Notes on the Management of Spoiled Identity*, Prentice-Hall, New Jersey, 1963, p. 3

184 D. Ogunleye, *Religion, Sexuality and Gender Violence in Nigeria*, Malthouse Press, Lagos, 2017, p. 98

Anor v. The State where the Supreme Court asserted that the delay in reporting by rape victims does not undermine their credibility, considering the cultural shame linked to such disclosure.¹⁸⁵

The Evidence Act 2011, particularly section 68, recognizes the role of forensic and expert evidence in establishing facts scientifically¹⁸⁶, however, these provisions are rendered almost ineffective where societal attitudes discourage victims from submitting themselves for timely forensic examination or even from reporting the offence altogether.

As noted by Adekoya and Oyediran in their work, victims often fear social exclusion from their families and communities, which results in a substantial underreporting of sexual offenses and a limited use of forensic evidence¹⁸⁷. Likewise, Okagbue who highlighted that the social condemnation and silence surrounding sexual issues foster a "culture of concealment," rendering the collection of evidence nearly impossible.¹⁸⁸

(ii) Cultural and Patriarchal Norms

Cultural beliefs that glorify female chastity and perceive sexual issues as private family matters foster an environment of silence regarding sexual violence. In numerous Nigerian communities, the victim is often held accountable for "inviting" the assault through her attire or behavior. As noted by Oluduro (2015) in *Sexual Violence and Human Rights in Nigeria*, patriarchy sustains male supremacy, depicting sexual aggression as an emblem of masculinity rather than a criminal act. As a result, victims frequently refrain from seeking forensic examination to safeguard their own reputations or those of their families.

(iii) Religious and Moral Influences

Religious values are intertwined with stigma. In conservative environments, victims are often viewed as impure or sinful, particularly when the offender holds a position of authority within the religious or community context. This viewpoint deters individuals from seeking medical or forensic evaluations, which may necessitate the exposure of private areas. The societal focus on virginity and purity further perpetuates

¹⁸⁵ (2018) 1 NWLR (Pt 1601) 401 SC

¹⁸⁶ s 68 Evidence act 2011

¹⁸⁷ F. Adekoya and A. Oyediran, "Gender, Sexual Violence and Justice in Nigeria", *Nigerian Journal of Gender Studies*, Vol. 6, No. 2, 2019, p. 50

¹⁸⁸ T. Okagbue, "Social Condemnation and the Culture of Silence in Sexual Assault Cases", *Social and Legal Studies Journal*, Vol. 22, No. 3, 1996, p. 330

a culture of secrecy. As Balogun articulates this "moralization of sexual assault" hinders communities from providing support for victims in their pursuit of forensic or legal assistance.¹⁸⁹

(iv) Psychological and Emotional Challenges Faced by Victims

The psychological impact of sexual assault including fear, shame, guilt, and distrust significantly influences victims' willingness to engage with forensic processes. As noted by Umar in his work, numerous survivors experience post-traumatic stress disorder (PTSD), which often leads them to withdraw from investigations. This withdrawal can result in incomplete DNA samples, a compromised chain of custody, or inconsistent testimonies, all of which can undermine the admissibility of forensic evidence as stipulated in Sections 83 and 84 of the Evidence Act 2011, concerning the relevance and reliability of evidence.

4.8 Victim Related challenges

Victim related challenges encompass the personal, psychological, emotional, and situational difficulties faced by individuals who have experienced sexual violence these challenges can significantly influence their capacity or willingness to report the crime, participate in forensic examinations, collaborate with law enforcement, or provide testimony in court.¹⁹⁰

These challenges represent individual level barriers that stem from trauma, fear, shame, a lack of trust in institutions, or practical impediments such as poverty or illiteracy.

As noted by Umar in his work, these elements frequently "interfere with evidence-gathering, delay justice processes, and lead to withdrawal or non-cooperation by survivors"¹⁹¹. In essence while socio cultural barriers originate from societal attitudes, victim-related challenges arise from the personal experiences of the victim and their reactions to these social pressures.

¹⁸⁹ Balogun (2020) Faith, Gender and Sexual Crimes in Nigeria

¹⁹⁰ A. B. Umar, Psychological Barriers to Justice for Sexual Assault Victims in Nigeria, Malthouse Press, Lagos, 2021, p. 78

¹⁹¹ Ibid, p. 80

(i) Psychological Trauma and Emotional Distress

Sexual violence is a deeply traumatic experience, often leaving victims with long-term psychological scars such as fear, anxiety, post-traumatic stress disorder (PTSD), and depression. Victims may experience shock, confusion, guilt, or dissociation, and in that state, many do not think to preserve forensic evidence.¹⁹²

Umar explains that trauma interferes with the victim's ability to recall details, to immediately report to the police, or to undergo invasive forensic procedures like rape kit collection and this could lead to the delay in medical examination which may result in the degradation of biological materials (semen, saliva, blood).

In *Alabi v. State* the Nigerian Court of Appeal acknowledged that delay in reporting sexual offences may stem from emotional trauma, not fabrication, emphasizing emphasizing judicial recognition of post assault distress.¹⁹³

(ii) Stigmatization and Self-Blame

Numerous victims internalize the stigma associated with sexual assault. They often perceive that being raped diminishes their reputation or their family's honor. This internalized shame, compounded by societal judgment, frequently results in self-blame, with thoughts such as "perhaps I provoked it" or "perhaps I should not have gone there."¹⁹⁴

In his sociological analysis of stigma, Goffman refers to this as the "management of spoiled identity," wherein the victim views themselves as irreparably tainted by disgrace. In the Nigerian context, Adegoke & Esere note that victims frequently encounter ridicule, even from family members or law enforcement officials a situation termed secondary victimization.¹⁹⁵

Thus it's Impact on Forensic Evidence which ranges from:

(a) Situations where victims may conceal the incident or decline medical examination

(b) Victims fear of being labeled as "promiscuous" which further deters them from reporting

¹⁹² Ibid, p. 82

¹⁹³ (1993) 7 NWLR (Pt 307) 511 CA

¹⁹⁴ E. Goffman, *Stigma: Notes on the Management of Spoiled Identity*, Prentice-Hall, New Jersey, 1963, p. 65

¹⁹⁵ F. Adegoke and M. Esere, "Secondary Victimization of Sexual Assault Survivors in Nigerian Institutions", *Journal of Interpersonal Violence*, Vol. 33, No. 4, 2018, p. 750

And as a result, vital forensic evidence is lost, rendering evidence collection unfeasible. Section 38 of the Violence Against Persons (Prohibition) Act 2015, aims to safeguard victims' privacy and dignity by prohibiting the public disclosure of victims' identities to mitigate stigmatization¹⁹⁶

In *State v. Olowu*, the court expressed concern that delays in reporting often attributable to stigma significantly undermine forensic corroboration.¹⁹⁷

(ii) Fear of Reprisal or Retaliation

Numerous instances of sexual violence involve offenders who are familiar to the victim such as family members, neighbors, employers, or figures of authority.

Victims frequently experience apprehension regarding potential revenge, threats, or additional violence should they choose to report the incident¹⁹⁸. In patriarchal family structures, female victims (particularly minors) are often coerced into maintaining silence "to safeguard family honour."

Okagbue observes that victims residing in rural Nigeria encounter intimidation and social exclusion if they decide to accuse influential men or relatives. Section 36 of the VAPP Act 2015, stipulates the provision of protection orders and safe accommodations for victims of violence, however, the enforcement of these measures is inadequate, and victims frequently lack awareness of their rights.

(iv) Socio-Economic Constraints (Poverty and Access Issues)

Individuals hailing from poor backgrounds frequently encounter significant barriers in accessing hospitals, forensic laboratories, or legal assistance, and in numerous instances, public hospitals are devoid of rape kits or adequately trained staff, while private clinics impose exorbitant fees. For those residing in rural regions, obstacles related to transportation and costs render it nearly unfeasible to reach forensic facilities within the critical 72 hour window for evidence collection.

¹⁹⁶ Violence Against Persons (Prohibition) Act 2015, s 38

¹⁹⁷ (2012) LPELR-20093(CA)

¹⁹⁸ T. Okagbue, op. cit., p. 60.

Ameh indicates that the majority of police divisions lack a forensic unit, compelling victims to undertake lengthy journeys if they are able to do so at all.¹⁹⁹

Despite the provisions of the VAPP Act 2015 specifically in Section 36(2), which mandates free medical assistance for victims, the execution of this mandate remains severely constrained due to insufficient budgetary allocations and a shortage of trained personnel.

4.9 Prospects to reform: Legislative, Judiciary and technical development

The ongoing difficulties associated with the application of forensic evidence in sexual violence cases in Nigeria highlight the critical necessity for comprehensive reform.

Such reform should integrate enhancements in legislation, innovations within the judiciary, and advancements in technology to improve the processes of collecting, admitting, and utilizing forensic evidence, all while safeguarding the rights and dignity of victims²⁰⁰.

(i) Legislative Prospect For Reform

The legal framework regulating forensic evidence in Nigeria is still disjointed, lacking comprehensive statutory guidance regarding the collection, preservation, and admissibility of scientific evidence. Existing regulations are scattered across multiple laws, including the Evidence Act 2011, the Criminal Code, the Penal Code, and the Violence Against Persons (Prohibition) Act, 2015 (VAPP Act). Although these statutes acknowledge the importance of reliable evidence in criminal proceedings, they do not provide explicit procedural instructions for forensic practices.²⁰¹

As noted by Ogunleye and Adewumi in their publication the lack of a unified Forensic Evidence Act or a national framework to oversee forensic laboratories, DNA databanks, and expert accreditation has resulted in inconsistencies and impeded the standardization of forensic methodologies. Legislative reform serves as the cornerstone for embedding forensic science within Nigeria's judicial framework. This process entails the

199 C. Ameh, *Forensic Gaps in Nigeria's Rape Investigations*, Justice Initiative Press, Abuja, 2020, p. 45

200 O. Ikeazor, "The State of Forensic Science in Nigerian Criminal Justice", *Law Practice Journal*, Vol. 45, 2020, p. 28

201 R. Ifemeje, "Techniques of Forensic Investigation: An Overview", *Journal of Law and Science*, Vol. 8, No. 2, 2021, p. 120

examination, modernization, and implementation of laws to reconcile the disparity between advancing scientific techniques and antiquated legal stipulations.²⁰²

A significant concern is Nigeria's continued dependence on general evidentiary principles, lacking a specific legal framework for forensic evidence. Although the Evidence Act of 2011 represents an advancement over the previous 1945 alteration, it predominantly adheres to traditional approaches regarding expert testimony. It fails to explicitly incorporate contemporary forensic methodologies such as DNA fingerprinting, digital forensics, toxicology, or electronic chain of custody, compelling courts to depend on judicial discretion instead of statutory precision.²⁰³

Consequently, legislative reform should prioritize the following:

- (i) The establishment of a Forensic Science Regulatory Act that distinctly outlines forensic procedures, accreditation criteria, and chain of custody protocols.²⁰⁴
- (ii) A critical review of the Criminal Procedure Act (CPA) and the Administration of Criminal Justice Act (ACJA) to require the application of forensic tools in investigations related to sexual offenses, homicide, and other grave crimes.
- (iii) Enhancement of victim protection statutes, such as the Violence Against Persons (Prohibition) Act of 2015, to guarantee that medical examinations and forensic testing are obligatory within a designated timeframe following a sexual assault.
- (iv) The Evidence Act 2011 should be amended, specifically Sections 68–71 concerning expert evidence, its scope should be broadened to encompass digital forensics, DNA profiling, and other contemporary scientific techniques.
- (v) There should be an introduction of legal requirements for the utilization of rape kits and sexual assault referral centres (SARCs) to guarantee the systematic gathering of biological evidence.

202 I. Ogunleye and L. Adewumi, "Forensic Science and Criminal Justice in Nigeria: Challenges and the Way Forward", University of Lagos Press, Lagos, 2021, p. 88

203 S. E. Abang, *Forensic Evidence and Criminal Prosecution in Nigeria*, University of Nigeria Press, Enugu, 2019, p. 72

204 Ibid, p. 75

A comparative analysis of South Africa's Criminal Law (Sexual Offences and Related Matters) Amendment Act 2007 illustrates that the legislative codification of forensic processes can significantly enhance evidentiary reliability and conviction rates in cases of sexual violence as illustrated in *S v. Zuma*.²⁰⁵ Likewise, in *R v. Doheny and Adams*, the English Court of Appeal underscored the necessity for clear legislative and procedural frameworks governing DNA evidence, a model that Nigeria could adopt by enacting specific standards for the admissibility of forensic evidence²⁰⁶. Nations such as the United Kingdom and South Africa have established legislative frameworks that incorporate forensic protocols directly into criminal procedures Nigeria could adopt similar measures to attain improved investigative uniformity. Ultimately, legislative reform guarantees that forensic evidence is regarded not as a discretionary or innovative element but as a statutory necessity in criminal proceedings.

(ii) Judicial Prospects for Reform

The judiciary holds a crucial position in determining the admissibility and evidentiary significance of forensic materials through its interpretations and established precedents. Nevertheless, Nigerian courts have historically exhibited caution and inconsistency in the acceptance of forensic evidence, frequently due to inadequate presentation, procedural errors, or insufficient expert credibility. Judicial reform focuses on reshaping the court's approach to the evaluation, appreciation, and application of forensic evidence. The judiciary remains the ultimate gatekeeper of admissibility; hence, its perception of forensic science determines how effectively justice is served.²⁰⁷

Historically, Nigerian courts have been conservative in admitting forensic evidence due to poor expert presentation, lack of judicial familiarity, and procedural lapses in chain of custody. Forensic materials, even when available, are often rejected for not meeting technical admissibility standards. For instance, in *Oseni v. The State*, the Court of Appeal emphasized that expert evidence must be credible, pertinent, and

²⁰⁵ [1995] 2 SA 642)

²⁰⁶ [1997] 1 Cr App R 369 (England)

²⁰⁷ A. B. Umar, *Evidentiary Hurdles in Sexual Violence Cases in Nigeria*, Malthouse Press, Lagos, 2023, p. 110

appropriately connected to the relevant facts before it can be deemed reliable²⁰⁸. Likewise, in *Nwosu v. State*, the Supreme Court determined that while expert evidence is admissible, it is not obligatory for the court unless it is adequately corroborated. These rulings underscore an urgent necessity for judicial reform through specialized training and procedural advancements.

Judicial reform should focus on:

- (i) Establishing specialized courts for sexual offenses or divisions for forensic evidence within existing courts to address technical issues with expertise and sensitivity.
- (ii) Continuous capacity building through seminars and workshops organized by the National Judicial Institute (NJI) on topics like DNA profiling, toxicology, and digital evidence
- (iii) Adoption of progressive evidentiary interpretation where judges assess scientific evidence based on its probative value and reliability rather than rigid procedural formalities.
- (iv) Strengthening the use of expert witnesses, ensuring that their qualifications, independence, and credibility are scrutinized according to global best practices.
- (v) Promoting ongoing judicial education via institutions such as the National Judicial Institute (NJI), concentrating on modern forensic techniques, DNA technology, and the jurisprudence of chain of custody.
- (vi) Encouraging judicial activism in the broad interpretation of evidentiary statutes to embrace scientific progress rather than adhering to strict literalism.

As highlighted by A. Sanni " The judicial understanding of forensic science is frequently limited by a lack of exposure and an overdependence on traditional testimonial methods²⁰⁹. Therefore, a progressive judiciary must adopt a more science-friendly interpretative approach, ensuring that forensic science acts as an instrument of justice rather than a source of procedural uncertainty. In a justice system that aims to protect victims of sexual violence, judicial reform means developing courts that are both science-literate and victim-sensitive.

(iii) Technical and Institutional Prospects for Reform

208 (1984) 5 NCLR 508 CA

209 A. Sanni, "Judicial Approaches to Scientific Evidence in Nigeria", *Ibadan Bar Journal*, available at: www.ibadanbar.org, accessed 26 November 2025

Technical and infrastructural challenges continue to be among the most significant barriers to effective forensic practice in Nigeria. The nation possesses only a limited number of operational forensic laboratories, chiefly the Lagos State DNA and Forensic Centre (LSD&FC), which has a restricted reach across the country. A majority of police investigations still depend on confessional statements instead of scientific analysis a situation highlighted by Adeleke (2022) in his work "Forensic Evidence and Criminal Prosecution in Nigeria".²¹⁰

To address this issue, technical reform should focus on both enhancing capacity and strengthening institutions. There there should be improvements on:

- (i) The expansion of forensic infrastructure through the establishment of regional forensic laboratories coordinated by the Nigeria Police Force Criminal Investigation Department (CID) and NAPTIP.
- (ii)The training and certification of forensic experts, medical examiners, and police investigators in contemporary evidence collection and preservation methods to avoid contamination.
- (iii)The digitalization and creation of databases, which encompasses the establishment of a national DNA database and a crime scene management system to enhance traceability and identification.
- (iv) The reinforcement of collaboration with international organizations such as INTERPOL and the United Nations Office on Drugs and Crime (UNODC) to obtain technical assistance and adopt best practices.

As Prof. Yemi Osinbajo observed in his address “without the integration of science and technology into our justice system, the pursuit of justice will remain a moral aspiration rather than a factual determination²¹¹.”

Thus, comprehensive reform must not be in bits but systematically anchored on legislative innovation, judicial enlightenment, and technical modernization to ensure that forensic evidence fulfills its true role as the “silent witness” in Nigeria’s justice system. Significant reform regarding the application of forensic evidence in Nigeria must function across three interrelated dimensions legislative, judicial, and technical. Legislative reform will establish explicit statutory guidance and contemporary evidentiary standards;

210 D. Adeleke, *Forensic Evidence and Criminal Prosecution in Nigeria*, Justice Initiative Press, Abuja, 2022, p. 60

211Y. Osinbajo, "Keynote Address at the Nigerian Bar Association Conference on Criminal Justice Reform", NBA Proceedings, Abuja, 2018

judicial reform will guarantee equitable, informed, and scientifically literate adjudication; whereas technical reform will enhance the infrastructure and expertise necessary for reliable forensic practice.

4.10 Comparative analysis of the use of forensic evidence in sexual violence offences in the United Kingdom, India and Ghana

The deployment of forensic science as well as forensic evidence in sexual violence prosecutions has evolved distinctively across various jurisdictions, shaped by statutory reforms, judicial attitudes, broader socio-cultural environment and institutional capacity. A look at the United Kingdom, India and Ghana demonstrates how legal systems with shared colonial roots now differ significantly in both evidentiary mundanity and practical outcomes.²¹²

In the United Kingdom, the practice of forensic in sexual violence offences is strongly backed by statutory and procedural frameworks, and the courts have developed a long tradition of relying on scientific evidence as part of the fact finding process. The Police and Criminal Evidence Act 1985 (PACE), the Criminal Justice Act 2003 and the Sexual Offences Act 2003 collectively provides the backbone for the collection, admissibility and probative use of forensic material²¹³. DNA evidence in particular has become central to investigations, and this has been supported by the National DNA Database and the Forensic Science Regulator's Code of Practice, which ensure chain of custody integrity and scientific reliability. In *R v Doheny & Adams* the court of appeal affirmed the use of DNA profiling while cautioning against statistical over statement, demonstrating a judicious balance between scientific enthusiasm and legal prudence²¹⁴. Furthermore, the case of *R v Tsekiri* reaffirmed that a conviction may primarily rest on forensic or DNA evidence if properly tested and explained²¹⁵. For sexual offences cases, the UK's Sexual Assault Referral Centres (SARCs) provides 24-hours facilities for medical examination, forensic sampling and victim support, ensuring early collection and preservation of high quality evidence. Chalmers & Leverick, "The evidential value of forensic evidence", consistently notes that the UK's strength lies not only in statutory

212 O. Ikeazor, "The State of Forensic Science in Nigerian Criminal Justice", *Law Practice Journal*, Vol. 45, 2020, p. 30

213 Police and Criminal Evidence Act 1984, c 60 (UK); Criminal Justice Act 2003, c 44 (UK); Sexual Offences Act 2003, c 42 (UK)

214 [1997] 1 Cr App R 369

215 [2017] EWCA Crim 40

clarity but also in an integrated forensic eco system that links health services, law enforcement and prosecutorial authorities²¹⁶

India, by contrast, reflects a system that endorses forensic science on paper, yet struggles with institutional and infrastructural delays. Statutory provisions under the Indian Evidence Act 1872 (particularly s. 45 and 46), the Code of Criminal Procedure 1973, and the Criminal Law (Amendment) Act 2013 position medical and forensic evidence as key components in rape investigations²¹⁷. The Supreme Court in *State of Punjab v Gurmit Singh* held that medical findings, though not indispensable, remain crucial in corroborating sexual-offence allegations²¹⁸. More recently, *Mukesh v State the Delhi gang rape case* illustrated how DNA analysis, bite mark comparison, and digital forensics can be decisive in securing convictions²¹⁹. India's Ministry of Home Affairs has also issued guidelines mandating the use of Sexual Assault Evidence Collection (SAEC) kits and the establishment of chain of custody protocols. However, systemic concerns persist, in the sense that forensic laboratories are overburdened, delays are common, and many states lack adequately trained examiners. Scholars such as B. N. Mishra who argue that while the judiciary is receptive to scientific proof, the bottlenecks lie in resource allocation, training, and institutional coordination²²⁰. Importantly, Indian courts have abandoned the discredited "two-finger test" in *Rajesh v State of Haryana*, it was reaffirmed that the role of modern forensic medicine is grounded in consent, dignity, and scientific accuracy.²²¹

Ghana sits in an intermediate position as far as forensic evidence is concerned, the legal system recognizes the probative force of forensic evidence, but practical usage remains modest due to infrastructural and technical limitations. Statutory support exists under Ghana's Evidence Act 1975, which allows expert testimony on scientific matters, and the Domestic Violence Act 2007 and Criminal Offences Act 1960,

216 J. Chalmers and P. Leverick, "The evidential value of forensic evidence", *Criminal Law Review* (Crim LR), 2019, p. 320

217 Indian Evidence Act 1872, ss 45, 46 (India); Code of Criminal Procedure 1973 (India); Criminal Law (Amendment) Act 2013 (India)

218 (1996) 2 SCC 384

219 (NCT of Delhi) (2017) 6 SCC 1 (India SC)

220 B. N. Mishra, "Forensic Science and the Criminal Justice System in India", *Journal of Indian Law and Society* Vol. 9, No. 1, 2018, p. 64

221 (2013) 14 SCC 643 (India SC)

which mandate medical examination and documentation of injuries in sexual violence cases²²². The establishment of the Ghana Police Service Forensic Science Laboratory has improved access to DNA profiling and toxicology analysis, though its capacity is still developing. Judicial decisions underscore the court's receptiveness to scientific evidence; and this was judicially illustrated in *The Republic v Kwaku Frimpong*, the court accepted DNA evidence linking the accused to biological samples recovered from the complainant, demonstrating a willingness to rely on forensic indicators where properly authenticated. In practice, however, many sexual assault cases still proceed with limited forensic support because victims often report late, health facilities lack forensic examination kits, and chain of custody protocols are not uniformly enforced. A. A. Appiah, in his work noted that while the judiciary's theoretical acceptance is strong, institutional capacity remains the chief barrier to more consistent forensic deployment.²²³

A comparative assessment of these jurisdictions highlights a common theme, Forensic evidence has become increasingly central in the adjudication of sexual-violence offences, yet its utility depends heavily on national investment, legislative clarity, and professional competence. The United Kingdom represents a mature model with well-defined procedural safeguards and advanced forensic infrastructure; India reflects a highly receptive judiciary constrained by uneven implementation and systemic delays; and Ghana illustrates a jurisdiction in transition, with growing institutional support but persistent resource challenges. Across the three countries, the trend is convergent the law increasingly expects scientific corroboration, victims' rights frameworks prioritise medical-forensic documentation, and courts continue to refine the standards for admissibility, reliability and probative value. For Nigeria, these comparative insights are instructive: they reveal the importance of legislative coherence, early evidence collection, investment in forensic laboratories, and a judiciary that both embraces scientific progress and scrutinises it with methodological care.²²⁴

222 Evidence Act 1975 (NRCD 323) (Ghana); Domestic Violence Act 2007 (Act 732) (Ghana)

223 A. A. Appiah, "Forensic Science and Criminal Prosecutions in Ghana", *University of Ghana Law Journal*, Vol. 25, 2020, p. 190

224 S. E. Abang, *Forensic Evidence and Criminal Prosecution in Nigeria*, University of Nigeria Press, Enugu, 2019, p. 89

CHAPTER FIVE:

RECOMMENDATIONS AND CONCLUSION

Based on the analysis presented in the previous chapters, it is evident that the evidentiary capacity of forensic science in cases of sexual violence is substantial. Nevertheless, its successful implementation in Nigeria has been hindered by unclear legislation, deteriorating infrastructure, insufficient expertise, and deeply rooted socio-cultural obstacles²²⁵. For forensic evidence to realize its potential in enhancing the delivery of justice, a comprehensive reform that encompasses legislative, judicial, institutional, and socio-cultural dimensions is essential.

Therefore, the following recommendations are suggested to improve the effective use of forensic evidence in cases of sexual violence.

(1) Legal reforms and statutory clarity

There exists a pressing necessity for a comprehensive legislative reform to establish a clear legal framework governing the collection, preservation, and admissibility of forensic evidence in Nigeria. The Evidence Act of 2011, specifically Sections 68–76 concerning expert opinion, lacks the necessary detail to adequately regulate contemporary forensic methodologies such as DNA profiling, serology, or digital trace analysis²²⁶. Despite the ongoing modernization of Nigerian law through instruments such as the Evidence Act 2011 and the Administration of Criminal Justice Act (ACJA) 2015, the nation still lacks a thorough legislative framework for forensic evidence that addresses current issues like DNA profiling, digital forensics, toxicological testing, and the management of evidence chain of custody²²⁷. This legislative gap has resulted in inconsistencies in practice, weak enforcement, and a pervasive lack of trust in scientific evidence presented in courts.

The Evidence Act 2011, while progressive in certain sections such as Sections 68–76 that acknowledge expert opinion, fails to offer sufficient procedural or substantive guidance regarding the qualifications of forensic experts, the scientific validation of forensic techniques, or the admissibility of emerging

225 James Okonkwo, 'Addressing Forensic Challenges in Nigeria's Criminal Justice System' (2021) 14(3) *Nigerian Journal of Criminology and Forensic Science* 215, 220

226 Evidence Act 2011, s 68–76

227 United Nations Office on Drugs and Crime (UNODC), 'Forensic Science in Nigeria: A Gap Analysis' (UNODC Report 2020) 15

technologies like DNA sequencing and digital trace analysis²²⁸. Consequently, courts have frequently had to depend on judicial discretion in the absence of statutory clarity, leading to inconsistent outcomes²²⁹. However, the Act does not define “special skill,” which renders the acceptance of expert forensic testimony susceptible to subjective judicial interpretation.

Nevertheless, in the absence of legislative clarity regarding the accreditation and standardization of forensic laboratories or the qualifications of forensic professionals, such judicial statements have limited practical implications. The lack of a governing statute has also resulted in difficulties in authenticating evidence acquired through contemporary scientific methods such as DNA analysis, which, despite being widely accepted globally, lacks explicit statutory regulation in Nigeria²³⁰. It is imperative for the National Assembly to introduce a Forensic Science and Evidence Management Act, which would explicitly outline the procedures for evidence handling, laboratory accreditation, and the qualifications of experts. This proposed Act should be in alignment with international best practices as delineated in the United Nations Office on Drugs and Crime (UNODC) Handbook on Forensic Evidence and Criminal Justice (2016) and International Criminal Police Organization (INTERPOL) Guidelines on Crime Scene Management (2019).²³¹

Pertinent legislation such as the Administration of Criminal Justice Act (ACJA) 2015 and the Violence Against Persons (Prohibition) Act 2015 ought to be revised to mandate forensic examinations in cases of sexual assault investigations, accompanied by penalties for the tampering or improper handling of forensic exhibits²³². The legislative framework ought to take cues from similar jurisdictions. For instance, in South Africa, the Criminal Law (Forensic Procedures) Amendment Act, 2013, often referred to as the "DNA Act," establishes a comprehensive legal structure for the collection, preservation, and application of DNA evidence. Similarly, the United Kingdom’s Criminal Justice Act 2003 and the Police and Criminal Evidence

228 Adedeji Adekunle, *The Nigerian Evidence Act: Principles & Practice* (3rd edn, University of Lagos Press 2018) 112

229 Ifeoma Udoka, 'Judicial Discretion and Scientific Evidence Admissibility in Nigeria' (LawHub Nigeria 15 October 2023) www.lawhubnigeria.com accessed 20 November 2025

230 Emeka Chinedu, 'The Admissibility of DNA Evidence in Nigerian Courts: A Legal Lacuna' (2019) 8 *Journal of Forensic Legal Medicine* 45

231 United Nations Office on Drugs and Crime (UNODC), *Handbook on Forensic Evidence and Criminal Justice* (UN 2016) 45

232 Violence Against Persons (Prohibition) Act 2015

Act 1984 (PACE) provide a systematic framework that regulates the admissibility of scientific evidence while ensuring procedural fairness²³³. These examples illustrate the efficacy of codified standards in safeguarding the integrity and evidentiary value of forensic materials.

Furthermore, the Nigeria's legislative reform must also enhance adherence to international obligations. Article 7 of the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) impose responsibilities on state parties to guarantee that victims of gender based violence have access to effective legal remedies which inherently includes the dependable use of forensic evidence in sexual offence trials²³⁴. Thus, legislative clarity would not only foster domestic justice but also fulfill Nigeria's treaty obligations under international law.

Moreover, reforms should revise related statutes such as the Administration of Criminal Justice Act 2015 and the Violence Against Persons (Prohibition) Act 2015 to explicitly mandate forensic examination in all sexual violence investigations, especially in cases involving penetration, bodily harm, or death²³⁵. Section 34(1) of the 1999 Constitution (as amended) affirms the right to dignity of the human person, and this constitutional protection should guide the establishment of procedures that ensure victims of sexual violence are examined and treated within a humane, scientifically sound framework. The lack of forensic procedures not only endangers the integrity of evidence but also infringes upon the victims' rights to ensure fair and dignified treatment under the law.

In order to protect against contamination and procedural misconduct, the proposed Forensic Science and Evidence Management Act ought to establish a definitive chain of custody protocol. This would necessitate that every officer involved in the handling of forensic materials signs and documents the transfer of evidence, with established penalties for any breaches. Additionally, the Act should institute a statutory presumption of reliability for scientifically validated forensic techniques (such as DNA analysis, toxicology, and ballistics), which could be challenged by opposing counsel. Such legal Sagay presumptions would

233 Criminal Justice Act 2003 (UK); Police and Criminal Evidence Act 1984 (PACE) (UK)

234 Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) (1979) Art 7; Protocol to the African Charter on the Rights of Women in Africa (Maputo Protocol, 2003) Art 4-5

235 1999 Constitution of the Federal Republic of Nigeria (as amended), s 34(1)

bolster prosecutorial efficiency and enhance judicial trust in forensic evidence. As Itse Sagay aptly stated, “Law must grow with science; otherwise, justice will be trapped in the past”²³⁶. Without the modernization of legislation, Nigeria risks perpetuating a criminal justice system that is ill-equipped to meet the evidentiary requirements of a scientific era. Likewise, Afe Babalola, SAN, emphasized that courts cannot function independently of advancements in forensic science if justice is to retain its significance and credibility.²³⁷

(2) Judicial and procedural reform

Beyond legislative measures, the judiciary serves as the primary gatekeeper of forensic evidence and the guardian of evidentiary integrity within criminal proceedings. Although Nigerian courts have demonstrated an increasing receptiveness to scientific evidence, there is a pressing necessity for comprehensive judicial and procedural reforms to guarantee a consistent, informed, and objective analysis of forensic materials in cases of sexual violence. The fundamental aim of this reform is not to establish new rights but to effectively implement existing statutory and constitutional assurances of fair trial, due process, and evidentiary reliability.

Judicial reform should commence with enhancing capacity and fostering scientific literacy. A significant number of trial judges, prosecutors, and defense attorneys in Nigeria lack specialized expertise in forensic science, which frequently results in the misinterpretation or outright dismissal of probative scientific evidence²³⁸. However, when a judge lacks the scientific foundation necessary to evaluate expert testimony, justice suffers due to ignorance. Consequently, the National Judicial Institute (NJI) ought to institutionalize ongoing forensic education for judges, prosecutors, and legal practitioners, concentrating on DNA analysis, chain of custody, biological and toxicological interpretation, and the standards for the admissibility of expert reports.

²³⁶ Itse Sagay, *Nigerian Law of Evidence* (2nd edn, Spectrum Books 2010) 512

²³⁷ Afe Babalola, *Law and Practice of Evidence in Nigeria* (1st edn, Afe Babalola University Press 2013) 210

²³⁸ Bamidele Aturu, 'The Need for Scientific Literacy in the Nigerian Judiciary' (ThisDay Live 12 February 2022) www.thisdaylive.com accessed 20 November 2025

Furthermore, the Nigerian judiciary is required to address procedural deficiencies in the chain of custody and management of exhibits challenges that have persistently compromised the reliability of forensic evidence in sexual violence cases. The chain of custody denotes the sequential documentation of every individual who has handled the evidence from its collection to its presentation in court. A failure to uphold this chain frequently leads to the exclusion of otherwise credible evidence²³⁹. The lack of procedural safeguards within Nigeria's trial framework renders forensic exhibits vulnerable to tampering, contamination, and doubts regarding their evidentiary value.

Another facet of judicial reform pertains to the standardization of expert qualifications and the discretion exercised by judges in admitting expert testimony. Nigerian courts have exhibited inconsistency in determining who qualifies as an expert²⁴⁰. The judiciary must establish a uniform accreditation framework potentially through Practice Directions issued by the Chief Justice of Nigeria that delineates minimum qualifications and accreditation criteria. For forensic practitioners serving as expert witnesses, it is essential to ensure that only qualified and certified professionals are allowed to provide scientific testimony in court. The National Judicial Council (NJC) should also partner with forensic institutions and universities to create bench books and procedural manuals for judges and prosecutors, outlining how forensic evidence should be received, evaluated, and weighed. Similar resources are available in other jurisdictions for example, the U.S. Federal Judicial Center's Reference Manual on Scientific Evidence, which offers practical guidance for judges on comprehending and managing scientific proof²⁴¹. Establishing a Nigerian counterpart would greatly improve judicial efficiency and minimize conflicting decisions stemming from evidentiary ambiguity.

Additionally, comparative insights can be gleaned from the South African judiciary, which functions under a unified system that incorporates forensic standards into criminal procedures. Nigerian courts have the capacity to implement similar procedural caution, particularly in accordance with Section 36(1)

²³⁹ Administration of Criminal Justice Act 2015, s 105

²⁴⁰ Clement Nwankwo, 'Standardizing Expert Testimony in Nigerian Courts' (2020) 22 *Journal of Law and Judicial Review* 88, 92

²⁴¹ Federal Judicial Center, Reference Manual on Scientific Evidence (3rd edn, National Academies Press 2011)

Constitution, which ensures the right to a fair hearing²⁴². Adequate judicial management of forensic evidence fulfills this constitutional duty by guaranteeing that convictions rely on verifiable evidence rather than speculation or coerced statements.

Judicial reform should also encompass collaboration among prosecutors and investigators, Judges, prosecutors, and investigators ought to receive training within a cohesive framework that highlights the significance of early forensic engagement in sexual violence investigations. This collaboration guarantees that evidence is gathered with the admissibility for trial in consideration, thus reducing procedural mistakes that could endanger prosecution. As Aguda pointed out, “a law court that cannot understand or apply scientific methods becomes an instrument of injustice”²⁴³. Consequently, the judiciary's function extends beyond mere interpretation; it necessitates the adaptation of the law to align with the changing realities of evidence. Likewise, Itse Sagay has contended that the courts must “evolve with the science of proof” to maintain the integrity of justice²⁴⁴. These insights highlight the necessity for a judiciary that is scientifically informed, procedurally robust, and jurisprudentially advanced.

(3) Socio-cultural and victim-centered intervention

No reform of forensic evidence in cases of sexual violence can be effective unless the widespread socio-cultural attitudes that influence both the reporting and investigation of these crimes are addressed. In Nigeria, cultural silence, stigma, and patriarchal bias present significant barriers that hinder victims from pursuing justice or preserving essential forensic evidence. These socio-cultural obstacles frequently result in delayed reporting, contamination of evidence, and ultimately, unsuccessful prosecutions. Consequently, the efficacy of forensic science in trials concerning sexual offenses relies not solely on technical or legal reforms but also on the transformation of societal and institutional attitudes towards victims.

Furthermore, socio-cultural reforms should prioritize public awareness and community re-education. Numerous victims, especially in rural or traditional contexts, continue to perceive sexual violence as a

²⁴² s36(1) Cfn 1999 constitution (as amended)

²⁴³ Akinola Aguda, *Law and Practice Relating to Evidence in Nigeria* (2nd edn, MIJ Professional Publishers 1989) 305

²⁴⁴ Itse Sagay, *Nigerian Law of Evidence* (2nd edn, Spectrum Books 2010) 515

familial issue rather than a criminal one, resulting in underreporting and the loss of crucial forensic evidence. Awareness campaigns spearheaded by the National Human Rights Commission (NHRC), civil society organizations, and traditional leaders can significantly contribute to dismantling this culture of silence. The CEDAW Committee and the Maputo Protocol both call upon state parties to eradicate cultural and traditional practices that obstruct women's access to justice a responsibility that Nigeria must fulfill through sustained efforts in advocacy and education.

A vital aspect of reform focused on victims is the establishment of forensic sexual assault response centres (SARC) within public hospitals and police departments. These centres ought to be equipped to gather, preserve, and document forensic evidence immediately following an assault, while also offering medical, psychological, and legal assistance to survivors. The Mirabel Centre in Lagos has already illustrated the effectiveness of this approach, providing trauma-informed care and ensuring the prompt preservation of evidence. Expanding such centres across the nation would greatly enhance the reliability of forensic evidence and restore victims' confidence in the justice system.

Socio-cultural and victim-centred initiatives close the divide between legal frameworks and lived experiences. They humanize forensic justice by ensuring that victims are not only heard but also supported throughout the process.

(4) Institutional and technical strengthening

The effectiveness of forensic processes in prosecuting sexual violence is contingent upon the presence of robust institutions and contemporary technical infrastructure. The justice system in Nigeria is hindered by insufficient forensic laboratories, inadequate inter-agency collaboration, and restricted access to advanced scientific resources. Consequently, meaningful reform necessitates the establishment and appropriate funding of both national and regional forensic laboratories, the development of a centralized forensic database for DNA and sexual offense evidence, and improved cooperation among the Nigeria Police Force, the Ministry of Justice, and medical institutions. Additionally, capacity-building initiatives for investigators, pathologists, and prosecutors are crucial to guarantee the proper handling and interpretation of evidence. As

highlighted by the UNODC (2016) and INTERPOL (2019), the sustainability of justice in cases of sexual violence relies on the dependability of institutions responsible for collecting, preserving, and presenting scientific evidence²⁴⁵. Enhancing these frameworks will close the divide between science and justice, ensuring that forensic evidence serves as a pivotal and credible instrument in Nigeria's battle against sexual violence.

(5) Academic and professional capacity building

The efficacy of forensic evidence in cases of sexual violence fundamentally relies on the proficiency of the professionals involved in its collection, analysis, interpretation, and presentation. In Nigeria, there is a persistent disconnect among legal practitioners, investigators, and forensic scientists, which leads to miscommunication, improper evidence handling, and inconsistent judicial results²⁴⁶. Therefore, enhancing academic and professional capacities is crucial to bridging this divide and establishing a competent, multidisciplinary framework that can facilitate evidence-based prosecutions.

Law faculties, medical schools, and forensic science institutions should integrate interdisciplinary curricula that familiarize students with the legal, procedural, and scientific dimensions of forensic evidence. It is essential to incorporate courses on forensic law, criminalistics, DNA analysis, and evidence management into the training of law students, while science and medical students should be educated on the legal standards for admissibility, expert testimony, and courtroom ethics. This dual approach guarantees that both legal professionals and scientists comprehend the evidentiary and procedural requirements of sexual violence cases, thereby reducing errors that could jeopardize prosecutions.

Furthermore, professional development should extend beyond academic settings to include ongoing education for practicing judges, lawyers, prosecutors, and forensic specialists. Institutions such as the National Judicial Institute (NJI), the Nigerian Law School, the Nigerian Bar Association (NBA), and the Institute of Forensic Science of Nigeria (IFSN) ought to require regular training and certification programs.

²⁴⁵ United Nations Office on Drugs and Crime (UNODC), *Handbook on Forensic Evidence and Criminal Justice* (UN 2016) 60; INTERPOL, *Guidelines on Crime Scene Management* (INTERPOL 2019) 12

²⁴⁶ Nigerian Bar Association (NBA) Human Rights Institute, 'Bridging the Gap: The Role of Forensic Science in Nigerian Criminal Litigation' (NBA Magazine 2021) 45

These initiatives should emphasize emerging forensic technologies, the preparation of court-ready reports, and the ethical management of sensitive evidence. Additionally, training should simulate courtroom situations where forensic evidence is challenged, thereby enhancing both presentation and adjudication skills.

In addition, collaborations with international forensic institutions and professional exchanges can expedite knowledge transfer and provide Nigerian professionals with exposure to global best practices in forensic science.

(6) Political commitment and sustainable funding

The efficacy of forensic evidence in the prosecution of sexual violence crimes fundamentally relies on ongoing political commitment and sufficient financial resources. Legislative changes, judicial education, and institutional enhancement can only thrive if there is a governmental dedication to prioritize forensic science as an essential element of the justice system. At present, Nigeria's forensic infrastructure suffers from chronic underfunding, leading to inadequately equipped laboratories, a lack of personnel, and delays in the processing of vital evidence.²⁴⁷

Political dedication should be reflected in strategic budgetary allocations for the creation and upkeep of regional and national forensic laboratories, ongoing professional development initiatives, victim assistance services, and advanced forensic technologies. Funding strategies can be bolstered through dedicated justice sector financing, public-private partnerships, and international grants aimed at enhancing forensic capabilities. Sustainable funding also necessitates transparent oversight and accountability, with monitoring by parliamentary committees, the judiciary, and civil society organizations to guarantee that resources are directed to forensic institutions and utilized effectively. In the absence of such oversight, even well-meaning policies may face stagnation or mismanagement.

Moreover, political leaders must publicly emphasize the importance of forensic science in criminal justice policy, ensuring that prosecutions for sexual violence are approached with urgency and professionalism. As

²⁴⁷ Economic and Financial Crimes Commission (EFCC), 'Annual Report on Justice Sector Funding in Nigeria' (EFCC Press 2022) 33

highlighted by Aremu (2020), enduring reform in the justice sector is achievable only when the government acknowledges forensic science as not merely an ancillary service but as a constitutional and social duty to safeguard victims, uphold due process, and deliver credible justice²⁴⁸.

CONCLUSION

The research has shown that forensic evidence is crucial for the investigation and prosecution of sexual violence crimes in Nigeria. It addresses the evidentiary void caused by victims' hesitance to testify, the lack of eyewitnesses, and the challenges in proving penetration or consent. Nevertheless, in spite of its evidentiary importance, the Nigerian legal system continues to face challenges regarding admissibility, chain of custody, inadequate infrastructure, and socio-cultural opposition. To secure justice for victims of sexual violence, Nigeria must progress from mere rhetorical promises to concrete reforms that enhance both the scientific and legal frameworks surrounding forensic evidence. Legislative clarity, judicial awareness, infrastructural development, and social reorientation constitute the four essential pillars that support the effective application of forensic evidence. The incorporation of forensic science into Nigeria's criminal justice system transcends a mere technological upgrade, it represents a moral and constitutional obligation to achieve fair trials, uphold human dignity, and restore public trust in the justice system. Should the proposed reforms be enacted, the Nigerian legal framework will not only ensure accountability for sexual violence perpetrators but also reaffirm the nation's dedication to justice, equity, and the rule of law.

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248 Olufemi Aremu, *Forensic Science and the Future of Justice in Nigeria* (Spectrum Books 2020) 180

effective application of forensic evidence. The incorporation of forensic science into Nigeria's criminal justice system transcends a mere technological upgrade, it represents a moral and constitutional obligation to achieve fair trials, uphold human dignity, and research has shown that forensic evidence is crucial for the investigation and prosecution of to restore public trust in the justice system. Should the proposed reforms be enacted, the Nigerian legal framework will not only ensure accountability for sexual violence perpetrators but also reaffirm the nation's dedication to justice, equity, and the rule of law.

In addition to these findings, the research further reveals that the future of sexual offence adjudication in Nigeria depends on a deeper institutional commitment to evidence-based justice. Forensic science cannot operate in isolation; it requires functional policing, trained investigators, responsive medical services, and a judiciary that understands the scientific principles behind forensic techniques. Without this synergy, forensic evidence risks being underutilised, misunderstood, or even wrongly excluded, thereby weakening the pursuit of justice.²⁴⁹

Furthermore, the study underscores that societal attitudes remain one of the greatest obstacles. Even with perfect forensic systems, community stigma, victim-blaming, delayed reporting, and traditional norms often prevent survivors from seeking timely help²⁵⁰. This makes forensic reform inseparable from broader socio-culture re-orientation public education, empowerment of survivors, stronger reporting mechanisms, and sensitization of law enforcement officers.

This research also shows that Nigeria must invest heavily in modern laboratories, digital storage of evidence, trained forensic pathologists, sexual assault referral centres (SARCs), and cross institutional collaboration. Effective forensic practice requires timely evidence collection, properly documented chain of custody, and adherence to global best practices²⁵¹. Without this, the scientific value of forensic evidence becomes compromised. The study concludes that a reformed forensic framework is not just an improvement to criminal procedure. It is a safeguard for constitutional guarantees. It strengthens the presumption of innocence by ensuring that convictions are based on objective proof rather than suspicion, while

249 Yemi Oshibajo, 'Integrating Forensic Science into Nigeria's Criminal Justice System: Challenges and Opportunities' (Paper presented at the National Conference on Forensic Science and Justice, Abuja, 2021)

250 National Agency for the Prohibition of Trafficking in Persons (NAPTIP), 'Report on Socio-Cultural Barriers to Reporting Sexual Violence in Nigeria' (NAPTIP Press 2023) 55

251 International Criminal Police Organization (INTERPOL), Guidelines on Crime Scene Management (INTERPOL 2019) 20

simultaneously empowering victims by validating their experiences through scientific confirmation. If Nigeria commits to these reforms legal, institutional, cultural, and scientific the use of forensic evidence in sexual violence cases will not only enhance the credibility of prosecutions but will transform the entire justice system into one that is more transparent, reliable, and aligned with the principles of fairness and human dignity.

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