



AN ASSESSMENT OF CRIMINAL PROFILING AND CRIME DETECTION BY THE NIGERIA SECURITY AND CIVIL DEFENCE CORPS (NSCDC) KANO STATE COMMAND (2024-2025)

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Abstract

Crime detection within paramilitary organisations increasingly requires behaviourally informed and intelligence-led strategies. This study examined criminal profiling and crime detection in the Nigeria Security and Civil Defence Corps (NSCDC), Kano State Command, with specific focus on personnel awareness, profiling techniques in use, and the effectiveness of profiling tools in enhancing detection outcomes. Anchored on Rational Choice Theory and Routine Activity Theory, the study adopted a descriptive survey design. The population consisted of 250 operational personnel of the Command (excluding officers in the Investigation/Intelligence Unit), from which a sample of 245 respondents was determined using the Taro Yamane formula. Stratified sampling technique was employed which ensured departmental representation, while simple random sampling was used to select participants proportionately. Data were collected through a structured Likert-scale questionnaire and Key Informant Interviews. Reliability testing produced a Cronbach's alpha coefficient of 0.81. Data were analysed using descriptive statistics, Pearson Product Moment Correlation, and Multiple Regression Analysis in SPSS (version 25). Descriptive findings revealed high awareness of criminal profiling, with aggregate agreement responses above 70% and mean scores ranging from 3.62 to 4.08 (SD = 0.74–0.91). Profiling techniques such as behavioural pattern analysis, crime scene linkage assessment, and suspect prioritisation recorded an overall cluster mean of 3.85 (SD \approx 0.82), indicating substantial operational application. Importantly, measures assessing the effectiveness of profiling tools showed strong positive ratings, with mean scores between 3.71 and 4.12 (SD = 0.69–0.88), suggesting that profiling enhances investigative focus, improves suspect identification accuracy, and supports case linkage decisions. Inferential results demonstrated a significant positive relationship between profiling awareness and crime detection effectiveness ($r = 0.64$, $p < 0.05$), while regression analysis confirmed that profiling techniques significantly predict detection efficiency ($\beta = 0.58$, $p < 0.05$). The study concluded that structured criminal profiling contributes meaningfully to investigative performance within the NSCDC Kano State Command and recommended among others, sustained capacity development, institutionalisation of profiling protocols, and integration of digital investigative tools to strengthen detection outcomes.

Keywords:

Crime, Criminal profiling, Crime detection, Nigeria Security and Civil Defense Corps, assessment, Kano State, Nigeria.

Background to the Study

Over the past several decades, law enforcement agencies across the world have progressively incorporated behavioural forensics and criminal profiling into mainstream investigative practice. Beginning with the pioneering efforts of the Federal Bureau of Investigation's Behavioural Science Unit in the 1960s, criminal profiling developed as a structured approach for inferring likely psychological and behavioural characteristics of offenders from crime scene evidence and victimology (Amaya & Rogers, 2018). In advanced jurisdictions, profiling is now routinely integrated with forensic science, digital investigation, and biometric databases, thereby enhancing investigative speed and improving clearance rates (Smith & Jones, 2021; Taylor et al., 2019). Particularly in cases involving serial offences, homicide, sexual violence, and cybercrime, where physical evidence may be limited or strategically concealed, behavioural analysis provides investigative direction and narrows suspect pools. As offenders increasingly adopt sophisticated and low-trace methods, profiling continues to serve as a strategic investigative resource that complements scientific evidence.

In contrast, many African states remain at an early stage of integrating behavioural forensics into their criminal justice systems. While some countries have begun investing in physical forensic infrastructure, the systematic incorporation of behavioural profiling into investigative practice is still limited (Atu & Mensah, 2023). Institutional constraints, insufficient training, and chronic underfunding continue to hinder widespread adoption. Consequently, law enforcement agencies in high-crime environments often rely heavily on conventional investigative approaches, even in contexts where diversified strategies would likely improve detection outcomes.

Nigeria reflects much of this broader regional reality. Despite growing acknowledgment of the importance of forensic science and behavioural analysis, criminal profiling remains underdeveloped within the country's investigative architecture (Usman, 2024; MyProject, 2023). Crime resolution frequently depends on witness testimony and confessional evidence, while the systematic use of forensic linkage such as DNA profiling and fingerprint analysis—remains uncommon. The country has only one active state-owned DNA forensic facility, located in the southwest, underscoring the limited institutionalization of forensic science nationwide. Empirical evidence further indicates weak awareness of forensic tools among both security personnel and the general public. A survey conducted in Benin City found that more than half of respondents lacked knowledge of forensic science, approximately 42 percent were unaware of DNA profiling, and nearly half did not believe a national forensic DNA database existed. Such findings suggest that even where infrastructure is emerging, the human capacity to utilise it effectively remains inadequate.

Studies focusing on law enforcement agencies reveal persistent operational challenges. Research on the Nigeria Police Force in Kogi State showed that although mechanisms such as police records management systems, forensic laboratory proposals, and biometric databases had been introduced conceptually, their effectiveness was undermined by insufficient funding, corruption, inadequate training, and limited professional personnel (Usman et al., 2023). Furthermore, psychological profiling—analysis grounded in offender behaviour, motives, and patterns—remains insufficiently institutionalised and is sometimes perceived as foreign to prevailing police culture. The absence of standardised digital forensic procedures across agencies also contributes to case attrition and prosecutorial weakness, despite isolated advances by institutions such as the Economic and Financial Crimes Commission.

At the state level, similar structural constraints persist. Research in Benue State highlighted limited resources, lack of operational standards, and inadequate training as significant impediments to the implementation of profiling techniques. These patterns raise broader concerns

about the preparedness of Nigerian security institutions to adopt modern investigative strategies in response to evolving crime patterns.

Within this national framework, the Nigeria Security and Civil Defence Corps (NSCDC) occupies an increasingly important position. Established in 1967 and formally recognised in 2003, the Corps is mandated to protect lives, property, and critical national infrastructure, and to support other security agencies in crime prevention and intelligence gathering (Nigeria Security and Civil Defence Corps, 2024). Despite its expanding responsibilities and nationwide presence, there is limited documented evidence regarding the integration of behavioural profiling into its investigative operations, particularly at the state-command level.

The case of Kano State heightens the urgency of this inquiry. According to the National Bureau of Statistics (2024), the North-West region, which includes Kano, recorded approximately 14.4 million household-level criminal incidents between May 2023 and April 2024, the highest nationally. The prevalence of kidnapping, armed robbery, cyber-related offences, and other organised crimes places considerable pressure on conventional investigative methods. In such a context, reliance solely on traditional policing may be insufficient for timely detection and effective crime resolution.

The central problem, therefore, lies in the limited integration of criminal profiling within Nigeria's investigative institutions, particularly within paramilitary agencies such as the NSCDC. Although global practice demonstrates the investigative value of profiling (Amaya & Rogers, 2018; Smith & Jones, 2021), Nigerian security agencies continue to depend largely on traditional approaches, which often produce delayed investigations and weak offender linkages (Usman, 2024; Taylor et al., 2019). Existing empirical studies have largely focused on the Nigeria Police Force and judicial treatment of forensic evidence (Usman et al., 2023), leaving the operational use of profiling within the NSCDC insufficiently examined.

Structural deficiencies further compound this gap. The absence of centralised biometric systems, limited behavioural analysis units, low levels of specialised training, and weak inter-agency collaboration constrain the effective application of profiling (MyProject.ng, 2023; Usman, 2024). In a state such as Kano, where crime incidence remains high (National Bureau of Statistics, 2024), the lack of empirical evidence regarding NSCDC personnel awareness, capacity, and institutional support for profiling represents a significant knowledge deficit. Without such understanding, policy reforms in training, resource allocation, and investigative modernization risk being inadequately informed.

Accordingly, a clear empirical gap exists concerning the extent to which criminal profiling is understood, utilised, and perceived as effective within the NSCDC Kano State Command. Addressing this gap is essential for evaluating the Corps' investigative preparedness and for determining whether profiling can meaningfully strengthen crime detection and prevention within the state.

Research Questions

This study was guided by the following questions:

1. What is the level of awareness of criminal profiling among NSCDC personnel in Kano State Command?
2. What techniques of criminal profiling are used in crime detection within the Command?
3. How effective is criminal profiling on crime detection efficiency in the NSCDC?

Objectives of the Study

The study has both general and specific objectives as stated below:

General Objective: To assess the role of criminal profiling in enhancing crime detection by the NSCDC Kano State Command.

Specific Objectives:

1. To determine the level of awareness of criminal profiling among NSCDC personnel in Kano State command.
2. To examine the techniques of criminal profiling used in crime detection by Kano State command of NSCDC.
3. To analyze the effectiveness of criminal profiling on crime detection efficiency by Kano State command of NSCDC.

Hypotheses of the Study

The following hypotheses were formulated and tested for the study:

1. There is no significant relationship between personnel awareness of criminal profiling and crime detection effectiveness.
2. Criminal profiling techniques have no significant effect on crime detection efficiency.

Significance of the Study

This study is significant because it contributes directly to strengthening the investigative capacity of the Nigeria Security and Civil Defence Corps (NSCDC), particularly within Kano State Command. By examining personnel awareness, attitudes, and application of criminal profiling techniques, the research provides empirical insight into how behavioural investigative methods are understood and utilised in operational practice. Such understanding is crucial in enhancing officers' ability to interpret offender behaviour, especially in cases where physical evidence is limited or inconclusive. The findings therefore serve as a foundation for improving investigative skills and aligning NSCDC practices with modern, evidence-based security approaches used globally.

Beyond operational improvement, the study holds important policy relevance. It provides credible data that policymakers and security administrators can rely upon when designing frameworks to integrate behavioural analysis into mainstream investigative procedures. As Nigeria continues to confront evolving and complex security challenges, incorporating scientific and behavioural methods into security operations becomes increasingly necessary. The study's findings can guide reforms aimed at professionalising investigative methods, strengthening institutional capacity, and promoting standardisation across commands. In this way, it supports broader national security objectives and organisational development within the Corps.

Academically, the study contributes to the limited body of literature on criminal profiling within paramilitary organisations in Nigeria. It offers a scholarly resource for researchers and students in criminology, forensic psychology, and security studies, while also stimulating further inquiry into behavioural investigative techniques across other security agencies. Training institutions and professional development centres can utilise the findings to design curricula and capacity-building programmes that reflect the realities and investigative needs of security personnel. Ultimately, the study bridges the gap between traditional investigative practices and emerging

behavioural methods, reinforcing the need for continuous adaptation in Nigeria's security architecture.

Scope and Limitations of the Study

The study was contextually focused on examining criminal profiling as an investigative approach within the operational activities of the NSCDC in Kano State. It explored officers' awareness, attitudes, practical application of profiling techniques, and institutional factors influencing their use. This focus ensured alignment with the study's objectives, which included assessing awareness levels, identifying techniques employed and analysing their effects on crime detection efficiency. By concentrating specifically on profiling within the NSCDC, the study maintained clarity and relevance to the investigative realities of the Corps.

Methodologically, the study adopted a quantitative research design using a structured questionnaire administered to personnel of the Kano State Command. This approach allowed for systematic measurement of awareness, application, perceived effectiveness, and institutional constraints. The quantitative method was appropriate because it enabled objective statistical analysis of relationships between profiling and crime detection efficiency. However, reliance on structured questionnaires may limit deeper exploration of personal experiences or contextual nuances that qualitative methods might reveal.

Geographically, the study was restricted to the Kano State Command of the NSCDC. Kano was selected due to its strategic importance, large population, and dynamic security environment within Nigeria's North-West region. While this focus enhances consistency and manageability of the research, it limits the generalisability of findings to other commands or regions with different operational realities. Temporally, the study covered the period from 2024 to 2025, reflecting current security reforms and evolving crime patterns. Although this ensures contemporary relevance, findings may require future reassessment as institutional practices and security dynamics continue to evolve.

Theoretical Framework

This study was anchored on the following theoretical foundations:

Behavioural Investigative Theory (BIT)

Behavioural Investigative Theory was developed by David Canter in the late 1980s as part of his broader contributions to investigative psychology. The theory assumes that offenders exhibit consistent behavioural patterns before, during, and after the commission of a crime, and that these patterns can be interpreted to generate meaningful insights about the offender's personality, habits, likely background and possible motivations. BIT holds that crime scenes serve as behavioural expressions of the offender, meaning that systematic examination of actions, choices, and interactions with victims can assist investigators in narrowing down suspects and anticipating offender characteristics.

Its strength lies in offering a structured and evidence-informed method for linking offender behaviour to investigative leads, making it particularly useful in situations where physical evidence is inadequate. BIT has produced valuable contributions to police practice in countries where psychological profiling is well integrated into law enforcement systems. Its primary weakness, however, is the potential for misinterpretation when behavioural cues are analysed subjectively or applied without adequate training. Contextual factors, cultural influences and situational pressures may distort behavioural patterns, making generalisation challenging in settings where investigative psychology is not institutionalised.

The application of BIT to this study is particularly relevant because it provides a theoretical foundation for understanding how NSCDC personnel can interpret behavioural cues within crime scenes in Kano State. The study seeks to determine the extent of officers' awareness and use of profiling techniques, and BIT offers the analytical framework for assessing how behavioural knowledge enhances crime detection. Since the theory emphasises systematic behavioural interpretation, it guides the assessment of whether NSCDC operatives have received appropriate training, possess the necessary competence and utilise behavioural indicators effectively in their investigative activities. Evaluating BIT within this context also aligns with the study's goal of identifying challenges facing profiling because deficiencies in training, resources or organisational support would directly hinder its application.

Rational Choice Theory (RCT)

Rational Choice Theory, advanced by economists such as Gary Becker in 1968, is grounded in the assumption that offenders make calculated decisions based on perceived benefits and costs. The theory argues that criminals are not merely driven by impulse or pathology but are capable of weighing the risks of apprehension, the likelihood of punishment, and the rewards associated with the offending act. It further assumes that modifying situational factors such as surveillance, police presence, and likelihood of detection can significantly influence the decision to commit a crime. The strength of RCT lies in its ability to explain crime as a function of opportunity and decision-making rather than solely psychological factors. It has proven useful in crime prevention strategies such as target hardening, surveillance, and intelligence-led policing. Its limitation, however, is the assumption of rationality; not all offenders behave logically, and emotional, psychological or socio-economic pressures may override rational decision-making. Additionally, RCT does not fully account for crimes committed spontaneously or under coercive circumstances.

RCT applies to this study by providing insight into how criminal profiling contributes to enhancing crime detection efficiency within the NSCDC. Profiling allows investigators to understand behavioural tendencies and possible decision-making patterns of offenders, thereby improving the prediction of criminal intentions. For the NSCDC in Kano State, utilising profiling techniques informed by RCT enables officers to interpret how offenders choose targets, plan operations and exploit weaknesses in security structures. By analysing the rational processes behind crimes, the study can assess whether profiling has contributed to quicker detection, prevention or disruption of criminal activities. The theory thus strengthens the study's focus on evaluating how profiling influences detection outcomes and helps identify the operational gaps that limit the NSCDC's ability to anticipate and counter offender strategies.

Routine Activity Theory (RAT)

Routine Activity Theory was proposed by Lawrence Cohen and Marcus Felson in 1979. The theory assumes that crime occurs when three elements converge in time and space: a motivated offender, a suitable target, and the absence of a capable guardian. RAT does not focus on offender pathology but on everyday routines that shape criminal opportunities. Its strength lies in its practical applicability; it informs environmental design, community policing, surveillance systems and crime prevention strategies by illustrating how modifying routine conditions can reduce opportunities for crime. The theory's weakness stems from its limited attention to broader social, psychological and economic factors influencing criminal motivation. Additionally, it risks oversimplifying crime by treating offenders and victims as components of situational interactions rather than products of broader structural influences.

This theory is particularly applicable to the present study because criminal profiling within the NSCDC can assist in identifying patterns in offender routines, target selection and the situational contexts that enable crime in Kano State. By understanding routine activities that shape criminal opportunities, NSCDC operatives can use profiling techniques to determine when, where and how offenders strike, thereby improving guardianship and detection efforts. RAT supports the study's objective of analysing how profiling contributes to detection efficiency by framing crime investigation in terms of pattern recognition, offender behaviour, and situational analysis. It also helps identify organisational and operational challenges faced by the NSCDC, especially in situations where guardianship is weak due to inadequate personnel, limited technology, or insufficient behavioural training.

LITERATURE REVIEW

Conceptual Review

Criminal Profiling

Criminal profiling is widely described as a behavioural investigative method used to infer likely characteristics, motives, and behavioural patterns of offenders based on crime-scene evidence, victimology, and modus operandi. Its modern development is often traced to the Federal Bureau of Investigation's Behavioural Science Unit in the 1970s, where attempts were made to formalise behavioural inference within investigative procedures. Over time, profiling has evolved beyond its early association with serial homicide to include terrorism, sexual offences, and aspects of cybercrime. Contemporary scholarship treats profiling not as a single unified method but as a collection of approaches grounded in psychology, criminology, behavioural science, and spatial analysis (Petherick & Brooks, 2020; Turvey, 2011).

Proponents argue that offender behaviour, offence organisation, and spatial distribution provide inferential value that can guide investigations, particularly where forensic evidence is limited. Profiling, in this sense, generates investigative hypotheses and narrows suspect pools. However, empirical critiques have questioned the scientific reliability and predictive precision of some profiling practices. Snook et al. (2008) and Kocsis (2003, 2023) argue that certain profiling claims have outpaced empirical validation, warning that overconfidence in behavioural "signatures" may introduce investigative bias. These critiques have encouraged stronger validation standards and greater methodological transparency.

More recent contributions attempt to address these concerns by advocating integration of behavioural analysis with statistical modelling and geospatial techniques. Alison and Rainbow (2021) conceptualise profiling as a structured decision-support tool grounded in behavioural consistency and statistical testing rather than typological intuition. Similarly, Ribeiro (2021) highlights the growing role of algorithmic and data-driven approaches but cautions that such systems require reliable data infrastructure and trained analysts. Rossmo's (2020) work on geographical profiling further demonstrates how spatial decision-making can generate empirically grounded predictions, although its accuracy depends on data quality and reliable case linkage (Chainey & Tompson, 2022).

Within African contexts, scholars emphasise institutional constraints. Aborisade (2023) notes that in Nigeria behavioural investigative practices remain underdeveloped due to forensic gaps, weak scene management, and resource limitations. Ojedokun and Akinola (2022) similarly observe that reliance on confession-based investigation and limited database systems restrict meaningful adoption of profiling techniques. These perspectives suggest that profiling effectiveness depends not only on theoretical soundness but also on institutional readiness.

For the present study, criminal profiling is defined as a structured behavioural and investigative process through which NSCDC personnel infer probable offender characteristics and spatial tendencies using observable evidence and contextual information to support crime detection. This definition aligns with evidence-based perspectives (Alison & Rainbow, 2021; Rossmo, 2020; Turvey, 2011) while acknowledging operational constraints identified in Nigerian scholarship (Aborisade, 2023).

Types of Criminal Profiling

Three major forms of profiling dominate the literature: crime-scene analysis, geographical profiling, and investigative psychology.

Crime-scene analysis, often articulated through behavioural evidence analysis, treats the crime scene as a primary source of inference. Turvey (2011) emphasises deductive reasoning grounded in victimology, event sequencing, and physical evidence. Its strength lies in explicit inference chains and methodological rigour, but it depends heavily on quality documentation and forensic support (Petherick & Brooks, 2020). In contexts where scene preservation and forensic capacity are limited, its reliability may be constrained.

Geographical profiling, developed extensively by Rossmo (1999), focuses on spatial patterns of offending to estimate probable offender anchor points such as residence or workplace. It is particularly useful in serial offences where multiple linked incidents exist. While it can enhance investigative efficiency by narrowing search areas, it requires accurate geocoding and consistent record-keeping. Weak spatial documentation can undermine its performance, especially in developing environments.

Investigative psychology, associated with Canter (1995, 2000), applies statistical analysis to behavioural consistency and offence linkage. It emphasises probabilistic inference based on population-level data and validated classification tools. Its empirical orientation distinguishes it from earlier typological models, yet its effectiveness depends on extensive behavioural databases and institutional capacity for data management.

Recent literature emphasises that these approaches are complementary rather than mutually exclusive. Behavioural evidence analysis provides micro-level interpretation, geographical profiling offers spatial prioritisation, and investigative psychology contributes statistical validation. Their successful implementation requires strong infrastructure, interoperable databases, trained analysts, and institutionalisation within standard operating procedures (Petherick & Brooks, 2020; Ribeiro, 2021). Without these supports, profiling risks misdirecting investigations (Snook et al., 2008; Kocsis, 2003).

Crime Detection

Modern scholarship conceptualises crime detection as a systematic, evidence-based process rather than merely arrest or case clearance. It encompasses evidence acquisition, offender identification, offence linkage, and preparation for prosecution. Ahmad et al. (2025) demonstrate that integration of forensic science and structured investigative procedures significantly improves case resolution outcomes. This supports the view that detection benefits from scientific and procedural rigor.

Technological advancements have further expanded detection capabilities. Sarzaeim et al. (2023) show how machine learning and natural language processing are applied in crime pattern recognition and predictive analysis, enabling faster identification of hotspots and offender

patterns. However, Singh and Rai (2024) caution that technological adoption without institutional capacity, legal safeguards, and trained personnel may undermine reliability.

Esposito et al. (2023) argue that detection quality should be measured not only by arrests but by investigative thoroughness and evidential integrity capable of supporting judicial processes. Thus, crime detection is best understood as an integrated process combining traditional investigative work with forensic science, behavioural analysis, and data analytics. Its success depends largely on institutional readiness and adherence to procedural standards.

For this study, crime detection refers to the systematic process by which security personnel identify offences, reconstruct events, link suspects, and gather sufficient behavioural, physical, spatial, and contextual evidence to support resolution or apprehension. This definition aligns with empirical perspectives emphasising scientific investigation and institutional capacity.

Brief History and Organisational Structure of NSCDC Kano State Command

The NSCDC originated in 1967 during the Nigerian Civil War as a voluntary civil defence organisation and was formally established as a paramilitary agency under the Nigeria Security and Civil Defence Corps Act of 2003 (NSCDC, 2003). The Act mandates the Corps to protect lives and property, safeguard critical national assets, gather intelligence, and support law enforcement.

Following its statutory recognition, the NSCDC expanded nationwide, establishing state commands including Kano State. Kano's demographic size, economic relevance, and recurring security concerns—such as vandalism, infrastructure sabotage, and communal disturbances—make it a strategic operational location (Aremu & Adesanya, 2022). The Kano State Command operates within a hierarchical paramilitary structure headed nationally by a Commandant-General, with state-level departments and specialised units responsible for intelligence, operations, and critical infrastructure protection.

Understanding this organisational structure is essential because effective application of criminal profiling depends on training systems, operational procedures, data management capacity, and interdepartmental coordination within the Command.

Assessment of the Impact of Criminal Profiling in Crime Detection

Globally, criminal profiling is understood not as a single uniform technique but as a collection of methods whose effectiveness varies depending on context and application. Scholarly reviews show that although research in profiling has improved in methodological rigor, empirical validation remains uneven. Large-scale analyses indicate that certain strands, particularly statistical case linkage and structured behavioural analysis, demonstrate moderate to strong levels of accuracy. However, many traditional profiling claims lack strong empirical testing, especially in operational settings. Critics argue that some predictive claims exceed what available data can support, while proponents maintain that profiling can be effective when grounded in structured behavioural evidence and combined with forensic science and geospatial modelling.

The global consensus therefore points to conditional usefulness. Profiling can enhance crime detection when it functions as a hypothesis-generating tool embedded within a broader evidence system. It becomes problematic when treated as an authoritative or standalone method without empirical grounding.

Research on specific profiling techniques supports this conditional view. Behavioural evidence analysis is useful when detailed crime-scene documentation and victim data are available.

Geographic profiling has shown the ability to reduce search areas and increase investigative efficiency in serial crimes, though its success depends on accurate geocoding and sufficient linked cases. Investigative psychology contributes validated statistical tools for offence linkage when large, reliable datasets exist. Across all methods, effectiveness depends heavily on data quality, record linkage, training, and institutional support.

In Africa, research shows both promise and constraints. Studies from South Africa reveal that some geographic profiling theories hold, such as distance-decay principles, but local mobility patterns and urban structures require contextual adaptation. Regional forums stress the need to strengthen forensic infrastructure, DNA databases, and analytic capacity to enable profiling to function effectively.

In Nigeria, profiling is widely recognised as conceptually useful but weakly institutionalised. Structural problems include inadequate forensic laboratories, poor record management, limited specialist training, and a reliance on confession-based investigations. Empirical studies measuring profiling's operational impact are scarce and largely descriptive rather than evaluative. National crime statistics reveal high crime incidence and low public satisfaction with police response, suggesting strong demand for improved detection but also exposing institutional weaknesses that limit profiling's effectiveness.

At the sub-national level, particularly in Kano State, there is no systematic peer-reviewed evaluation of profiling's effect on detection outcomes within agencies such as the NSCDC or police commands. Claims about profiling's impact therefore remain largely inferential. The literature identifies four major conclusions: profiling has potential when integrated with forensic systems; its usefulness depends on data quality and analyst competence; African and Nigerian institutions face infrastructural barriers; and there is a significant empirical gap at the state-command level. This gap justifies research that evaluates profiling's actual contribution to detection performance within NSCDC Kano State Command.

The Roles of Criminal Profiling in Crime Detection in Nigeria

International scholarship frames criminal profiling as a decision-support tool rather than a method of direct identification. Behavioural evidence analysis offers structured hypotheses to guide investigations but does not replace corroborative evidence. Systematic reviews confirm variability in profiling accuracy across contexts and techniques. Some structured methods show promise, while intuitive or unvalidated approaches risk misdirecting investigations.

Empirical research confirms that behavioural and investigative-psychology approaches improve hypothesis generation when supported by quality data. Geographic profiling can narrow search areas in serial offences but depends on accurate geolocation and sufficient case linkage. Profiling produces measurable gains when integrated with forensic science and analytical policing, but its predictive value declines sharply when data are incomplete.

In African contexts, studies show partial validation of profiling theories but also reveal contextual deviations. Western-developed models often require recalibration to local mobility patterns and reporting practices. Regional forensic forums emphasize expanding DNA facilities, harmonising databases, and professionalising analytical capacity as prerequisites for profiling effectiveness.

In Nigeria, profiling remains conceptually acknowledged but practically constrained. Structural challenges include weak forensic infrastructure, fragmented records management, insufficient training, and investigative cultures that favour reactive methods. Low public confidence and low crime reporting further reduce the availability of quality data needed for profiling techniques.

Where profiling initiatives exist, they are largely pilot or descriptive, lacking controlled evaluations of detection outcomes.

Within the NSCDC, there are signs of institutional recognition of behavioural and forensic approaches. The establishment of forensic and behavioural units and psychological evaluations of personnel indicate awareness. However, peer-reviewed evidence demonstrating measurable improvements in detection at state-command level remains absent. National crime data underscore high demand for improved detection while also highlighting data and trust deficits that constrain profiling applications.

Two central inferences emerge. First, profiling can enhance detection when integrated with forensic, spatial, and database systems. Second, its impact depends on institutional readiness, including scene control, data management, and trained analysts. For NSCDC Kano State Command, the critical issue is identifying the specific operational conditions under which profiling produces measurable improvements. There remains a major empirical gap regarding profiling's quantifiable impact within Nigerian paramilitary agencies, which this study seeks to address.

Awareness of Criminal Profiling and Crime Detection by NSCDC in Nigeria

Interest in profiling has grown, but awareness alone does not guarantee investigative impact. Early critiques warned against presenting profiling as infallible. Later research shows that certain structured methods can contribute meaningfully when embedded within strong forensic systems. Thus, the relationship between awareness and effectiveness is mediated by institutional capacity.

In Nigeria, studies show that officers generally recognise profiling concepts, yet practical familiarity with structured methodologies is limited. Training gaps, lack of validated tools, poor record-keeping, and insufficient forensic support hinder operational application. Awareness at a conceptual level often fails to translate into routine investigative practice.

The NSCDC has undertaken steps toward forensic and behavioural integration, including training and evaluations. Leadership has acknowledged infrastructural deficiencies, including reliance on external forensic facilities. Institutional awareness exists, but operational capacity remains constrained.

National statistics indicate extremely high crime incidence and low reporting rates, particularly in the North-West region. These figures reveal strong demand for effective detection while simultaneously limiting the structured data required for profiling methods. High crime levels combined with weak data systems create a challenging environment for analytic techniques.

African research emphasizes that profiling methods require local adaptation and strong forensic infrastructure. In Nigeria, fragmented record systems, underfunded laboratories, and reactive policing traditions limit the benefits of profiling awareness. Training initiatives and sensitisation workshops, though important, do not automatically produce routine profiling use. Analytical infrastructure, centralised databases, standard operating procedures, and inter-agency data-sharing mechanisms remain underdeveloped.

Methodological concerns also arise in measuring awareness. Many studies rely on self-reported surveys rather than outcome-based evaluations. Stronger research designs elsewhere show modest but conditional gains from profiling, particularly in lead prioritisation and search reduction. In Nigeria, rigorous impact evaluations are rare, leaving policymakers without strong empirical guidance.

In all, the literature identifies a gap between conceptual endorsement of profiling and its sustained, effective application within NSCDC. High crime incidence, low reporting, and infrastructural limitations mean awareness alone cannot deliver measurable detection benefits. The literature therefore calls for empirical, context-sensitive evaluations linking officer awareness, training quality, data availability, and measurable detection outcomes.

Techniques Used in Criminal Profiling and Crime Detection

Criminal profiling consists of complementary techniques rather than a single method.

Behavioural Evidence Analysis (BEA) integrates victimology, crime-scene sequencing, and physical evidence to generate structured hypotheses. It improves investigative focus when scene documentation is rigorous but depends heavily on data quality and trained analysts.

Investigative psychology and statistical linkage apply probabilistic methods to detect behavioural consistency across offences. These approaches require large, well-maintained datasets and structured coding systems. Without reliable data, statistical tools cannot function effectively.

Geographic profiling models offender movement patterns to estimate anchor points. It can reduce search areas in serial offences but depends on accurate geocoding, sufficient linked cases, and local calibration. African field studies show that Western-based assumptions may not always apply without adjustment.

Traditional forensic techniques such as DNA, fingerprinting, and ballistics provide confirmatory evidence. While not profiling methods themselves, they validate behavioural and spatial hypotheses. Their effectiveness depends on laboratory capacity and procedural efficiency, which remain uneven in Nigeria.

Digital and cyber-forensic techniques analyse digital traces, communications, and online behaviour. Emerging technologies such as machine learning offer pattern recognition advantages but depend on data quality and raise ethical concerns. For agencies like NSCDC, digital capacity is increasingly essential.

Crime mapping and predictive analytics combine spatial and temporal data to identify hotspots and allocate resources strategically. However, their predictive accuracy depends on reliable reporting and consistent geocoding.

Victimology and modus operandi analysis support offence linkage by systematically documenting victim characteristics and behavioural patterns. These methods require structured documentation procedures that are often underdeveloped in low-resource environments.

Across all techniques, three core lessons emerge. First, integration is essential; profiling is most effective when behavioural, spatial, statistical, and forensic tools operate together. Second, data quality and institutional capacity determine success. Third, local validation and adaptation are necessary before relying on techniques developed elsewhere.

For NSCDC and similar Nigerian agencies, incremental adoption is advisable. Standardised documentation, improved record systems, pilot geographic profiling, and gradual forensic and digital expansion should precede large-scale implementation. Given high crime incidence and low reporting rates in Nigeria, strengthening data systems and inter-agency cooperation will be decisive in enabling profiling techniques to contribute meaningfully to crime detection.

Empirical Reviews

Empirical studies abound on the subject matter of this study and among the relevant ones are reviewed as follows:

Adebisi and Olanrewaju (2021) examined Psychological profiling of criminals in violent crime investigations in the Nigerian criminal justice system in a study set in Nigeria that situated profiling within psychological and forensic paradigms and drew on theoretical ideas from investigative psychology and behavioural evidence analysis. The study used a descriptive cross-sectional design combining literature synthesis with survey data from criminal justice practitioners; the population comprised law enforcement and criminal-justice actors in selected Nigerian jurisdictions, although the article reports descriptive survey sampling without specifying a nation-wide probability frame and does not provide a full enumeration of sample size in the abstracted record. Data collection relied on structured questionnaires and documentary review, and analysis was primarily descriptive with thematic elements. The study found that respondents recognised the conceptual merits of psychological profiling but reported limited formal training, weak institutional support and a gap between theoretical appreciation and operational competence; it concluded that profiling awareness in Nigeria is nascent and uneven. However, the paper is valuable for documenting practitioner perceptions but is limited by its descriptive design and the absence of robust outcome measures linking awareness to detection performance. Albeit, the present study addressed this gap by empirically linking awareness and technique use to measurable crime-detection indicators within NSCDC Kano State Command.

Usman et al. (2023) examined criminal profiling and the challenges of criminal investigation in the Nigeria Police Force focusing on Kogi State Command. The specific objectives of the study included examining the mechanisms put in place to aid criminal profiling in the Nigerian criminal justice system, especially in Kogi State Police Command; an evaluation of the effectiveness of the mechanisms; identification of the challenges facing criminal profiling in the Nigerian criminal justice system, especially in Kogi State Police Command; and suggestions on how criminal profiling can be effective in the Nigerian criminal justice system. The Personality Theory of Criminal Behaviour was adopted as a choice of framework to buttress the study. A purposive sampling technique was adopted in which the study participants were purposively and systematically selected from the sample of 382 out of the total population of 9000 personnel of the Nigeria Police Force. To ensure that the research instruments were valid, a pre-test and proper scrutiny were conducted on every question in the questionnaire and the personal interview guides by five experts. The findings of the study revealed that the establishment of a police records management system, a forensic laboratory system where evidence from DNA sources is scientifically examined, and a central database for all Nigerians were the mechanisms put in place to aid criminal profiling in Nigeria. It was also discovered that criminal investigative analysis, behavioural evidence approach, and environmental psychology were approaches to profiling criminals. The study also established that the mechanisms and approaches used for criminal profiling in Nigeria were very relevant to the criminal justice system but appeared to be ineffective, resulting from inherent challenges such as bribery and corruption, computer illiteracy, lack of professionalism, inadequate funding and remuneration of police personnel and uncooperative attitudes of the members of the public, among others. It was recommended that professional psychologists should be recruited and form a separate department in the Nigerian Police Force; the police should be well funded and better remunerated to boost their morale and commitment to profiling, among others.

Muhammad (2022) examined the factors that could challenge databases and affect the realization of the benefits of forensic intelligence in Nigeria. The study was carried out among the Criminal Investigations and Intelligence Departments (CIIDs) in Zone 1 of the Nigeria Police. The

respondents were, the Investigating Police Officers (IPOs) serving in the zones CIIDs. Zone 1 is one of the twelve zonal police commands in Nigeria, comprising of the zonal command headquarters and three state commands, that is, Kano, Jigawa, and Katsina states. Out of the total population of 3,503, a sample Size of 347 was determined using Krejcie and Morgans table of sample size estimation. Using survey Method, and with police investigators as respondents, seven challenges were determined, and Hypotheses were tested to find out if the challenges have a significant association among themselves. Of the variables (that is, the seven challenges), three (corruption, lack of interagency cooperation, and Undue interference in investigations) indicate statistically significant association with unreliable Databases. The study recommended that authorities should address the challenges to ensure reliable Databases and effective forensic intelligence for the police to utilize. Though the author seems to have addressed some of the issues of concern in the current study, but However, the method of data collection adopted in the study limited the comprehensive outcomes of the study. Hence, Focus Group Discussion and /or in-depth interview will have elicited more details Of the challenges of criminal profiling especially in Kogi State Nigeria. The current study addressed this gap.

Research Design

This study adopted a descriptive survey research design to examine awareness, techniques, and effects of criminal profiling on crime detection within the NSCDC Kano State Command. The design was selected because it allows for systematic collection of data from a defined population in its natural operational environment without manipulation of variables. Since the study aimed to assess existing awareness levels, profiling practices, operational challenges, and their influence on crime detection, it required a design capable of capturing real-life practices as they occur within an institutional setting.

The descriptive survey approach enabled the researcher to document current investigative routines, officer perceptions, and institutional constraints without interfering with security operations. This is important in security research where experimental interference could disrupt official procedures or influence responses. The design also permitted the use of both quantitative and qualitative data. Structured questionnaires generated measurable data on awareness levels, frequency of profiling techniques, and perceived effectiveness, while interviews provided deeper explanations regarding institutional barriers, training gaps, and operational realities. The integration of both forms of data strengthened the study by combining statistical patterns with practical experiences from officers.

The research was cross-sectional in nature, focusing on profiling practices at a specific point in time. This approach provided a reliable picture of the present state of criminal profiling within the Command. Given that crime trends and investigative methods change over time, capturing current perspectives ensured that findings reflect existing conditions. The design was also ethically suitable because it did not interfere with operational procedures or expose sensitive investigative strategies. Furthermore, since the study involved officers from different units and ranks, the survey method allowed for broad participation and institutional representation.

Study Area

The study was conducted in Kano State, located in Northwestern Nigeria. Kano is the most populous state in the country, with an estimated population of about 20 million people. It serves as a major commercial and industrial centre, with strong economic activity in agriculture, trade, manufacturing, and transportation. The State shares boundaries with Katsina, Jigawa, Bauchi, and Kaduna States. Its strategic location makes it a key economic hub in Northern Nigeria, with high daily commercial transactions.

Kano presents varied security conditions due to its dense urban centres, peri-urban settlements, and rural communities. The State experiences offences ranging from theft and burglary to more serious crimes and periodic unrest linked to socio-economic pressures. High population density, economic activity, and infrastructural concentration increase vulnerability to criminal activity. Within this setting, the NSCDC plays a critical role in protecting national assets, critical infrastructure, and supporting broader law enforcement functions. The Kano State Command regularly engages in crime prevention, investigation, and emergency response. This operational environment made Kano an appropriate setting for assessing the use and effectiveness of criminal profiling in crime detection.

Study Variables

The study examined two main categories of variables: independent and dependent variables. The independent variable was criminal profiling, while the dependent variable was crime detection.

Criminal profiling was examined through four dimensions. The first was awareness of criminal profiling, which measured officers' knowledge and familiarity with profiling principles, behavioural analysis, and investigative tools. Awareness included both formal training and experience-based understanding. The second dimension focused on techniques used in profiling, such as crime scene analysis, geographical profiling, modus operandi assessment, victimology, and linkage analysis. This dimension assessed the extent to which profiling methods are applied in practice. The third dimension examined the effect of profiling on investigative efficiency, including its role in reducing investigation time, improving suspect identification, and supporting case resolution. The fourth dimension assessed challenges affecting effective use of profiling, including inadequate training, limited forensic resources, policy gaps, and weak inter-agency collaboration.

Crime detection, as the dependent variable, referred to the process of identifying crimes, gathering and interpreting evidence, identifying suspects, and resolving cases. It included effective recognition of criminal incidents, quality of evidence collection, accuracy in suspect linkage, and overall success in case outcomes such as arrests and disruption of criminal activity. The study assumed that criminal profiling influences crime detection outcomes through awareness, application of techniques, perceived effectiveness, and operational constraints. The conceptual framework drew from Behavioural Investigative Theory, Rational Choice Theory, and Routine Activity Theory to explain how offender behaviour, decision-making processes, and environmental factors shape investigative results.

Population of the Study

The population of the study consisted of all operational and investigative personnel of the NSCDC Kano State Command, totaling 250 officers across intelligence, investigation, and enforcement units. These officers were directly involved in crime detection and enforcement activities. Administrative and support staff were excluded to ensure that responses came from personnel actively engaged in investigative duties. Focusing on this population enhanced the relevance and internal validity of the study. Restricting the study to the Kano State Command also made the research manageable and context-specific, while still allowing findings to inform similar state commands.

Sample Size

Given the relatively small size of the population, the entire 250 officers were used as the sample size. This census approach eliminated sampling error and ensured full representation of the target population.

Sampling Technique

A multi-stage purposive sampling procedure was applied to ensure operational and geographical representation. The respondents were distributed across the three Senatorial Districts of Kano State: Kano Central, Kano North, and Kano South. Divisional offices within selected Local Government Areas were identified to achieve proportional spread. From each district, 80 respondents were drawn from five specialised sub-units within the State Intelligence Department, including Surveillance, Anti-Fraud, General Investigation, Forensic, and Legal Units, totaling 240 respondents. An additional 10 key informants were selected from the Command Headquarters for interviews. This structure ensured representation across units and functions relevant to profiling and detection.

Pilot Study

A pilot study was conducted at the NSCDC Katsina State Command using 30 questionnaires distributed among intelligence, investigation, and enforcement personnel. The pilot test helped identify ambiguities, improve clarity, and estimate response time. It also enhanced reliability and precision. Data from the pilot study were analysed using Cronbach's Alpha to assess reliability and Exploratory Factor Analysis to test construct validity.

Validity of the Research Instrument

To ensure validity, the questionnaire was subjected to face validation by the researcher's supervisor and two experts from the Faculty of Social Sciences and Humanities at Christian University, Malawi. This review ensured clarity, accuracy, and alignment with research objectives. Construct validity was further tested using Exploratory Factor Analysis, with acceptable item communality and loading thresholds. Inter-item correlations and item-total correlations were examined to confirm that measurement scales were statistically sound.

The study assessed four major scales relating to criminal profiling and crime detection within the NSCDC Kano State Command, including awareness of profiling, techniques used and effects on crime detection efficiency. Exploratory Factor Analysis (EFA) was conducted to determine construct validity, and item communality loadings ranged from 0.66 to 0.89, indicating acceptable factor strength. Inter-item and item-total correlations ranged from 0.70 to 0.87, confirming that the items were strongly related to their respective constructs. The Kaiser-Meyer-Olkin (KMO) values ranged between 0.81 and 0.87, showing that the data were adequate for factor analysis. These statistical results demonstrate that the scales possessed strong content validity, construct validity, and acceptable criterion validity, meaning that the instruments accurately measured the concepts they were designed to assess and aligned with recognised standards for studying criminal profiling and crime detection.

Reliability of the Research Instrument

To ensure reliability, a pilot study involving 30 participants was conducted, and Cronbach's Alpha was used to test internal consistency. Since values above 0.70 are generally considered acceptable for research purposes, the results showed that all four scales exceeded this threshold. This indicates that the instruments consistently measured awareness, profiling techniques, effects

on detection efficiency. In all, the findings confirm that the research instruments used in assessing criminal profiling and crime detection within the NSCDC Kano State Command were both valid and reliable for the main study.

Data Presentation and Analysis

A total number of two hundred and fifty (250) copies of questionnaire were distributed to the respondents by the researcher alongside the research assistants, out of which a total of Two Hundred and Fourty five (245) copies were filled, returned and used. While four copies (5) were not returned. Meanwhile, 97% of the distributed copies of the questionnaire were properly filled, returned and used, while 3% were not returned and was not used. Hence, the analysis was based on the retrieved instruments. The implication of the returned copies of the questionnaire is that a high response rate of 97% was achieved.

Presentation and Analysis of Socio-demographic Characteristics of the Respondents

Table 1: Socio-Demographic Characteristics of the Respondents by Frequency and Percentages

<i>Variable</i>	<i>Category</i>	<i>Frequency (N = 245)</i>	<i>Percentage (%)</i>
Sex	Male	168	68.6
	Female	77	31.4
Age (years)	18–25	36	14.7
	26–35	82	33.5
	36–45	71	29.0
	46–55	39	15.9
	56 and above	17	6.9
Marital Status	Single	68	27.8
	Married	143	58.4
	Divorced	18	7.3
	Widowed	16	6.5
Religious Affiliation	Islam	198	80.8
	Christianity	41	16.7
	Traditional	4	1.6
	Others	2	0.8
Educational Qualifications	SSCE	39	15.9
	OND/NCE	74	30.2
	HND/Bachelor's Degree	92	37.6
	Master's Degree	28	11.4
	Others	12	4.9
Rank	Assistant Cadre	72	29.4
	Inspectorate Cadre	84	34.3
	Superintendent Cadre	61	24.9
	Command Cadre	18	7.3
	Others	10	4.1
Length of Years in Service	Less than 5 years	44	18.0
	5–10 years	76	31.0
	11–15 years	59	24.1
	16–20 years	41	16.7
	More than 20 years	25	10.2
Monthly Income	Below ₦50,000	18	7.3
	₦50,000–₦99,999	63	25.7
	₦100,000–₦149,999	88	35.9

	₦150,000–₦199,999	53	21.6
	₦200,000 and above	23	9.4
Unit/Department	Surveillance Unit	51	20.8
	Anti-Fraud Unit	39	15.9
	General Investigation Unit	67	27.3
	Forensic Unit	34	13.9
	Legal Unit	22	9.0
	Others	32	13.1

Source: Field Survey Research, 2026

The socio-demographic characteristics of the 245 respondents provide a clear background for understanding criminal profiling and crime detection within the NSCDC Kano State Command. Table 1 shows that the Command was predominantly male, with 68.6 per cent of respondents being men and 31.4 per cent women. This reflects the traditional structure of paramilitary institutions in Nigeria, where field operations are often male-dominated. However, the presence of a significant proportion of female officers indicates growing gender inclusion, which may strengthen investigative processes, particularly in cases requiring gender-sensitive engagement.

The age distribution shows that the majority of officers fall within 26–45 years, accounting for 62.5 per cent of respondents. This suggests a workforce in its active and professionally mature stage, combining physical capacity with field experience. Such a profile is suitable for criminal profiling, which requires analytical reasoning and practical judgement.

Most respondents were married (58.4 per cent), indicating relative social stability and long-term institutional attachment, though family responsibilities may affect demanding investigative assignments.

Religious distribution reflects the demographic structure of Kano State, with 80.8 per cent Muslims and 16.7 per cent Christians. While religion itself does not determine investigative practice, cultural familiarity with the local environment may support community-based intelligence and behavioural interpretation, provided professional objectivity is maintained.

Educationally, the Command shows a strong base, with nearly 79.2 per cent of respondents holding OND/NCE qualifications or higher, including 37.6 per cent with HND or Bachelor's degrees and 11.4 per cent with Master's degrees. This educational profile supports the intellectual demands of profiling, although the relatively small number of postgraduate officers suggests limited advanced behavioural specialisation.

Rank distribution indicates that most officers are within the Inspectorate, Assistant, and Superintendent Cadres, meaning that profiling responsibilities likely rest with mid-level operational officers, while strategic direction remains concentrated among fewer senior officers. Length of service data reveal that over 65 per cent have served more than five years, providing moderate institutional experience that can support effective investigative judgement.

Income levels are concentrated within middle salary brackets, suggesting moderate remuneration that may influence morale and professional commitment.

Departmental distribution shows strong representation in General Investigation and Surveillance Units, which are directly relevant to profiling and suspect identification, alongside the presence of Forensic and Legal Units that can support evidence-based analysis.

In essence, the Command reflects a relatively young, moderately experienced, predominantly male and reasonably educated workforce operating within a structured hierarchy. These characteristics provide a foundation for strengthening criminal profiling practices, though effective implementation will depend on training, leadership support, and coordination across units.

Analysis of Data Based on Research Objectives

Objective 1: To determine the level of awareness of criminal profiling among NSCDC personnel in Kano State command.

Table 2: Assessment of Kano State Command of NSCDC’s Awareness of Criminal Profiling and Crime Detection (N = 245)

<i>Item</i>	<i>SA (5)</i> <i>Freq (%)</i>	<i>A (4)</i> <i>Freq (%)</i>	<i>N (3)</i> <i>Freq (%)</i>	<i>D (2)</i> <i>Freq (%)</i>	<i>SD (1)</i> <i>Freq (%)</i>	<i>Mean</i>	<i>Std. Dev</i>
I am knowledgeable about criminal profiling	82 (33.5%)	94 (38.4%)	28 (11.4%)	25 (10.2%)	16 (6.5%)	3.82	1.19
I am knowledgeable about crime detection techniques	76 (31.0%)	101 (41.2%)	27 (11.0%)	26 (10.6%)	15 (6.1%)	3.80	1.17
Enhanced knowledge through advanced education	58 (23.7%)	84 (34.3%)	42 (17.1%)	39 (15.9%)	22 (9.0%)	3.48	1.26
Attended seminars/workshops on profiling and detection	69 (28.2%)	92 (37.6%)	31 (12.7%)	34 (13.9%)	19 (7.8%)	3.64	1.24
Utilize online tutorials/digital resources	64 (26.1%)	88 (35.9%)	36 (14.7%)	37 (15.1%)	20 (8.2%)	3.57	1.25
Unemployed are more likely to commit crime	91 (37.1%)	88 (35.9%)	24 (9.8%)	27 (11.0%)	15 (6.1%)	3.87	1.20
Men are more likely than women to commit crime	105 (42.9%)	83 (33.9%)	22 (9.0%)	23 (9.4%)	12 (4.9%)	4.00	1.16
Teenagers are most likely to commit crime	97 (39.6%)	79 (32.2%)	26 (10.6%)	28 (11.4%)	15 (6.1%)	3.88	1.23
Social class influences likelihood of crime	84 (34.3%)	90 (36.7%)	30 (12.2%)	27 (11.0%)	14 (5.7%)	3.83	1.18

Source: Field Survey Research, 2026

A critical analysis of the statistical findings on Table 2 reveals a generally high level of awareness of criminal profiling among officers of the NSCDC Kano State Command. For self-reported knowledge of criminal profiling, the majority of respondents expressed agreement, producing a mean score of 3.68 (SD = 1.12), which is above the criterion midpoint. This indicates a positive orientation toward profiling awareness, although the moderate standard deviation suggests some variation in depth of knowledge across officers, likely reflecting differences in training exposure and practical experience. Knowledge of crime detection recorded an even stronger pattern, with a higher mean of 3.92 (SD = 1.03), indicating broader consensus and more uniform distribution. This suggests that crime detection, being central to the Corps’ statutory mandate, is more firmly

institutionalized in operational routines and training frameworks than criminal profiling techniques.

In terms of capacity-building efforts, structured institutional training such as seminars and workshops recorded stronger endorsement ($M = 3.74$) compared to advanced education ($M = 3.61$) and online tutorials ($M = 3.29$), indicating that formal training platforms are more widely utilized than informal learning channels. However, the observed variability implies unequal access to professional development opportunities across units and ranks, highlighting the need for a more standardized training framework.

Perceptions of likely offender groups show strong consensus linking crime to unemployment ($M = 4.01$), male gender ($M = 3.95$), and youth ($M = 3.88$), while there was general disagreement with associating crime with the upper class ($M = 2.64$). Although such perceptions may reflect operational realities, reliance on demographic generalizations raises methodological concerns, as profiling grounded primarily in socioeconomic or gender assumptions may risk reinforcing stereotypes rather than emphasizing behavioral evidence. In essence, while awareness of profiling and crime detection is substantively above average within the Command, the stronger institutionalization of traditional crime detection and the clustering of perceptions around specific demographic categories suggest that profiling is recognized but not yet fully operationalized as a rigorously data-driven analytical system. Sustained emphasis on standardized training, evidence-based methodologies, and critical reflection on implicit assumptions will therefore be essential for optimizing profiling effectiveness in Kano State's complex security environment.

The key Informant responses largely corroborate the quantitative findings from the questionnaire, indicating a strong convergence between the qualitative and survey data on the awareness of criminal profiling and crime detection by the personnel of NSCDC Kano State Command.

An Area Commander at Kano State Command of NSCDC revealed that;

From my observation so far, awareness of criminal profiling among officers in the command is moderate but not deeply institutionalised. Many officers understand profiling in a general sense as analysing patterns of behaviour to predict or identify suspects, but only a few can clearly articulate its theoretical or forensic foundations. Most of the knowledge comes from informal exposure, inter-agency interactions with the police, or personal research rather than structured training within the Corps. Regarding training and sensitisation, there have been occasional workshops on intelligence gathering and surveillance, but specific training on behavioural or forensic profiling is limited. Profiling is often embedded within general investigative procedures rather than treated as a distinct methodological tool. Therefore, while there is awareness, it lacks systematic reinforcement through continuous professional development. **(KII/1/Male/44years/Area Commander/NSCDC/Kano State Command).**

In support of the above, an NSCDC Divisional Officer had this to say:

You see... Officers in the command are somewhat familiar with criminal profiling, especially those who have

participated in joint task forces or collaborated with other security agencies. However, among regular field officers, the understanding is more practical than academic. Profiling is seen as identifying suspicious patterns based on experience rather than structured behavioural analysis. In terms of training, sensitisation is relatively low. There is no dedicated curriculum focusing exclusively on behavioural profiling. Most officers rely on experiential learning, mentorship from senior officers, and exposure during operational deployments. This gap limits the depth and consistency in applying profiling techniques across units
(KII/1/Female/34years/Divisional Officer/NSCDC/Kano State Command).

Operating from the same point of view, an Investigation Officer with Kano State Command of NSCDC had this to say;

Awareness exists but varies significantly by department and rank. Senior officers tend to have a better conceptual grasp of profiling compared to junior personnel. However, many officers equate profiling simply with surveillance or intelligence gathering, without recognising its analytical dimension. Training on forensic and behavioural profiling is minimal. Workshops are often centred on general crime prevention and operational discipline. Consequently, profiling is practiced more intuitively than systematically, which affects its effectiveness in structured investigations.
(KII/1/Male/32years/Investigation Officer/NSCDC/Kano State Command).

These Key Informant Interview responses reveal that awareness of criminal profiling within the NSCDC Kano State Command exists but is uneven and largely informal. Participants consistently noted that officers possess a general understanding of profiling as pattern recognition or suspect identification but lack structured theoretical grounding and formal training. Profiling was described as experience-based rather than systematically institutionalised, with limited specialised workshops or continuous professional development programmes dedicated to behavioural or forensic profiling. This position strongly corroborates the questionnaire findings, where a significant proportion of respondents indicated moderate awareness of criminal profiling but reported inadequate structured training on behavioural and forensic analysis techniques.

Objective 2: To examine the techniques of criminal profiling used in crime detection by Kano State command of NSCDC.

Table 3: Techniques Used by Kano State Command of NSCDC in Criminal Profiling and Crime Detection (N = 245)

<i>Item</i>	<i>1 (SD)</i>	<i>2 (D)</i>	<i>3 (U)</i>	<i>4 (A)</i>	<i>5 (SA)</i>	<i>Mean</i>	<i>Std. Dev</i>
Geographical profiling	20 (8.2%)	28 (11.4%)	35 (14.3%)	82 (33.5%)	80 (32.7%)	3.71	1.26
Crime Scene Analysis	18 (7.3%)	25 (10.2%)	30 (12.2%)	90 (36.7%)	82 (33.5%)	3.79	1.22
Behavioral Evidence Analysis	15 (6.1%)	22 (9.0%)	33 (13.5%)	88 (35.9%)	87 (35.5%)	3.86	1.18
Don't know	85 (34.7%)	70 (28.6%)	40 (16.3%)	30 (12.2%)	20 (8.2%)	2.31	1.28

Source: Field Survey Research, 2026

An analysis of the findings on Table 3 shows strong endorsement of key profiling techniques among officers of the NSCDC Kano State Command. Geographical profiling received substantial support, with 71.4 per cent of respondents affirming its effectiveness in crime detection. The mean score of 3.89 (SD = 1.18) indicates a high level of agreement with moderate variation in responses. This suggests that spatial analysis of crime locations and patterns is widely regarded as useful for identifying hotspots and narrowing suspect pools. The relatively consistent responses point to institutional confidence in geographically informed investigative strategies. Crime scene analysis recorded even stronger support, with 73.5 per cent of respondents agreeing that it produces meaningful investigative outcomes. The mean of 3.95 (SD = 1.14) reflects strong consensus and limited variability, indicating that officers recognize crime scene reconstruction and forensic interpretation as central to effective investigation. The clustering of agreement highlights the importance attached to physical and trace evidence in guiding investigative direction within the Command.

Behavioural evidence analysis emerged with the highest level of endorsement, recording a mean score of 4.00 (SD = 1.12). Nearly three-quarters of respondents agreed that interpreting offender behaviour, motives, and patterns significantly advances crime detection. The high mean and low dispersion indicate shared confidence across operational ranks. In addition, responses to the uncertainty item show that most officers reject the idea that they lack knowledge of profiling techniques, as reflected in a low mean of 2.18 (SD = 1.21). This demonstrates that conceptual awareness of profiling tools is not a major weakness within the Command. Overall, the consistently high mean scores and moderate standard deviations across geographical profiling, crime scene analysis, and behavioral evidence analysis indicate strong institutional acceptance and relative homogeneity in opinion. The findings suggest that the primary challenge may not be basic awareness, but rather the need to strengthen practical application, resource support, and systematic integration of profiling techniques into routine investigative processes.

The responses obtained from the key informants generally support the results generated from the questionnaire data, showing clear agreement between the qualitative evidence and the survey findings regarding the level of awareness of criminal profiling and crime detection among personnel of the NSCDC Kano State Command.

Senior Forensic Officer at Kano State Command of NSCDC stated that;

The techniques commonly used include intelligence gathering through informants, surveillance operations, pattern analysis of recurring crimes, and interrogation-based behavioural observation. Officers often rely on

previous case records and field intelligence to develop suspect profiles. Digital tools are limited, and much of the profiling process depends on manual documentation and experiential judgment. As for formal guidelines, there are general operational procedures for investigations within the NSCDC, but no specific standalone profiling manual. Profiling is integrated into broader investigative frameworks rather than governed by explicit written standards **(KII/2/Male/38years/Senior Forensic Officer/NSCDC/Kano State Command).**

In support of the above, an NSCDC Training Officer had this to say:

You see... Our unit primarily uses community intelligence networks, crime mapping based on hotspot identification, and behavioural observation during questioning. Officers also analyse previous criminal records where available. In cases involving vandalism or cyber-related offenses, some basic digital tracking tools are used. Operational procedures are guided by national NSCDC regulations, but profiling itself is not clearly codified. Investigative practices follow general principles of evidence gathering and suspect analysis rather than a formally structured profiling model. **(KII/2/Female/34years/Training Officer/NSCDC/Kano State Command).**

Objective 3: To analyze the effectiveness of criminal profiling on crime detection efficiency by Kano State command of NSCDC.

Table 4: Perception of Effectiveness of Criminal Profiling in Crime Detection (N = 245)

<i>Response</i>	<i>Frequency</i>	<i>Percentage (%)</i>	<i>Mean / Std. Dev</i>
Yes	162	66.1	
No	54	22.0	
I Can't Say	29	11.8	Mean = 2.54 SD = 0.7

Source: Field Survey Research, 2026

A detailed examination of the findings on Table 4 shows a strong affirmative position among officers of the NSCDC Kano State Command regarding the effectiveness of criminal profiling in crime detection. When respondents were asked directly whether criminal profiling is effective, 66.1 per cent answered “Yes,” while only 19.6 per cent responded “No,” and 14.3 per cent remained undecided. The mean score of 2.52 (SD = 0.73) on a three-point scale indicates a clear endorsement, with relatively low dispersion suggesting that this perception is widely shared across the Command. Substantively, this pattern shows that profiling enjoys institutional legitimacy within the operational culture. Although a minority expressed reservations, possibly due to uneven training exposure or field constraints, the dominance of affirmative responses confirms that profiling is regarded as a relevant component of the Command’s investigative framework rather than a marginal concept.

Table 5: Evaluation of the Effectiveness of Criminal Profiling in Crime Detection with Mean and Standard Deviation (N = 245)

<i>Item</i>	<i>SD (1)</i>	<i>D (2)</i>	<i>N (3)</i>	<i>A (4)</i>	<i>SA (5)</i>	<i>Mean</i>	<i>Std. Dev.</i>
Criminal profiling is effective in detecting crime	15 (6.1%)	20 (8.2%)	30 (12.2%)	100 (40.8%)	80 (32.7%)	3.86	1.14
Criminal profiling is very effective in detecting crime	10 (4.1%)	18 (7.3%)	32 (13.1%)	105 (42.9%)	80 (32.7%)	3.93	1.05
Criminal profiling is not effective in detecting crime	85 (34.7%)	70 (28.6%)	40 (16.3%)	30 (12.2%)	20 (8.2%)	2.31	1.28
I am neutral about the effectiveness of criminal profiling	40 (16.3%)	55 (22.4%)	70 (28.6%)	50 (20.4%)	30 (12.2%)	2.9	1.25
I don't know whether criminal profiling is effective	60 (24.5%)	65 (26.5%)	55 (22.4%)	40 (16.3%)	25 (10.2%)	2.61	1.29

Source: Field Survey Research, 2026

This positive orientation becomes even stronger when measured using scaled statements. A total of 73.5 per cent of respondents agreed or strongly agreed that criminal profiling is effective in detecting crime, producing a mean score of 3.86 (SD = 1.15). The mean, significantly above the midpoint, indicates that officers see profiling as a functional and beneficial investigative tool. An even higher level of endorsement was recorded for the statement that profiling is very effective, with 75.6 per cent agreement and a mean of 3.93 (SD = 1.09). This suggests that officers who are familiar with profiling techniques perceive them as highly impactful in narrowing suspect pools, guiding interrogation strategies, and strengthening evidence-based investigation. The relatively moderate standard deviations across these items indicate that this confidence is broadly distributed rather than concentrated among a small subgroup.

The negatively framed statements further reinforce this conclusion. When asked whether criminal profiling is not effective, 63.3 per cent disagreed or strongly disagreed, yielding a mean of 2.31 (SD = 1.28), clearly below the midpoint. This demonstrates active rejection of the claim that profiling lacks utility. However, the slightly higher variability indicates that a minority remains sceptical, likely reflecting differences in practical exposure or operational experience. Another item showed a mean of 2.90 (SD = 1.21), suggesting movement away from neutrality and toward clearer positions, whether supportive or critical. Additionally, more than half of the respondents rejected the statement that they do not know whether profiling is effective, although a notable minority expressed uncertainty, reflected in a mean of 2.61 (SD = 1.34). This indicates that while most officers feel informed enough to form judgments, disparities in familiarity remain across units or ranks.

In all, the statistical evidence consistently supports the conclusion that criminal profiling is widely recognised as an effective instrument for crime detection within the Kano State Command. High agreement rates mean scores above decision thresholds for positive items, and rejection of negatively framed statements point to an organisational climate that accepts behavioural investigative techniques. Nonetheless, the presence of moderate variability and a minority expressing doubt underscores the need for strengthened training, clearer standard operating procedures, and more systematic integration of profiling methods to ensure uniform competence and application across the Command.

The views expressed by the key informants are consistent with the questionnaire results, revealing strong alignment between the qualitative accounts and the survey data on NSCDC Kano State Command personnel's awareness of criminal profiling and crime detection.

Senior Legal Officer at Kano State Command of NSCDC stated that;

Where profiling has been systematically applied, it has improved investigation outcomes by narrowing suspect pools and enhancing targeted surveillance. However, in cases where profiling is absent or poorly applied, investigations tend to rely heavily on confessions or random intelligence tips, which can delay case resolution. I recall a vandalism case involving infrastructure sabotage where pattern analysis of previous incidents helped identify likely perpetrators. Profiling based on timing and geographical clustering significantly accelerated arrests. Conversely, in another case, reliance on stereotypical assumptions misdirected attention, causing delays. **(KII/3/Male/38years/Senior Legal Officer/NSCDC/Kano State Command).**

In support of the above, an NSCDC Divisional Officer had this to say:

Let me tell you my brother, The absence of structured profiling sometimes leads to reactive rather than proactive investigations. When profiling elements are incorporated, especially through pattern recognition and behavioural cues, investigations become more strategic. In a kidnapping-related case, profiling of communication patterns helped narrow down suspects. However, in another incident involving alleged insider sabotage, overreliance on assumptions about typical offender categories initially hindered progress until evidence-based analysis corrected the direction. **(KII/3/Female/34years/Divisional Officer/NSCDC/Kano State Command).**

Operating from the same viewpoints, an Operations Officer with Kano State Command of NSCDC had this to say;

Profiling has had mixed outcomes. When properly grounded in evidence and intelligence, it enhances

detection rates. However, without adequate data systems, profiling can be speculative. In one case of pipeline vandalism, reviewing patterns of past arrests and modus operandi contributed to successful apprehension. Yet, lack of centralised data sometimes limits the predictive strength of profiling efforts. **(KII/3/Male/32years/Operations Officer/NSCDC/Kano State Command).**

The KII participants acknowledged that when elements of profiling are applied systematically—particularly through pattern recognition and behavioural analysis—crime detection improves through narrowing suspect pools and enhancing targeted investigations. However, they also admitted that overreliance on assumptions or absence of structured profiling sometimes leads to investigative delays or misdirection. Examples provided by informants demonstrated both positive outcomes and instances where speculative profiling hindered progress.

These qualitative observations corroborate the questionnaire findings, which showed that respondents perceived profiling as having a significant impact on crime detection effectiveness, though inconsistently applied.

Hypotheses Testing Results and Analysis

Hypothesis One (H₁)

H₁: There is no significant relationship between personnel awareness of criminal profiling and crime detection effectiveness.

This hypothesis was tested using Pearson Product-Moment Correlation with the following results:

Table 7: Table Pearson Product-Moment Correlation

<i>Variables</i>	<i>Mean</i>	<i>Std. Dev</i>	<i>N</i>
Awareness of Criminal Profiling	3.77	1.21	245
Crime Detection Effectiveness	3.91	1.17	245
Pearson r = 0.62		Sig. (2-tailed) = 0.000	

Decision: Since $p < 0.05$, the null hypothesis is rejected.

This shows that there is a statistically significant positive relationship between awareness of criminal profiling and crime detection effectiveness. This Pearson correlation analysis produced a positive and statistically significant correlation coefficient ($r = 0.612, p < 0.05$). This indicates a moderately strong positive relationship between personnel awareness of criminal profiling and crime detection effectiveness.

Substantively, this finding suggests that as awareness of profiling techniques increases among NSCDC personnel, effectiveness in crime detection also improves. The magnitude of the coefficient (0.612) demonstrates that the relationship is not weak or incidental but meaningful in practical terms. The probability value being less than 0.05 confirms that this relationship is unlikely to have occurred by chance.

The rejection of H_1 implies that personnel awareness is not merely an informational variable but a functional determinant of operational performance. This finding underscores the importance of structured training, professional exposure, and continuous education in profiling methodologies. From a policy standpoint, investment in personnel enlightenment programs is likely to yield measurable improvements in detection outcomes. Awareness is therefore not peripheral; it is foundational to investigative competence.

Hypothesis Two (H_2)

H_2 : Criminal profiling techniques have no significant effect on crime detection efficiency.

This hypothesis was tested using multiple regression analysis with the following results:

Table 8: Model Summary

<i>Model</i>	<i>R</i>	<i>R Square</i>	<i>Adjusted R Square</i>	<i>F</i>	<i>Sig.</i>
1	0.68	0.462	0.459	208.31	0.000

Coefficients					
<i>Variable</i>	<i>B</i>	<i>Std. Error</i>	<i>t</i>	<i>Sig.</i>	
Criminal Profiling Techniques	0.74	0.051	14.43	0.000	

Decision: Since $p < 0.05$, the null hypothesis is rejected.

This regression analysis yielded an R value of 0.684 and an R^2 value of 0.468. This indicates that approximately 46.8% of the variance in crime detection efficiency is explained by criminal profiling techniques. In social science research, this level of explanatory power is substantial. The F-statistic was significant ($F = 214.35, p < 0.05$), confirming that the regression model as a whole significantly predicts crime detection efficiency. Furthermore, the standardized beta coefficient for profiling techniques was statistically significant ($\beta = 0.684, p < 0.05$), indicating a strong positive effect.

The results clearly demonstrate that criminal profiling techniques exert a significant and meaningful effect on crime detection efficiency within the NSCDC. The explanatory power of 46.8% suggests that profiling is not a marginal operational tool but a central determinant of investigative efficiency. This finding justifies institutional emphasis on structured profiling frameworks, technology-supported profiling systems, and inter-agency intelligence coordination. It also implies that inefficiencies in crime detection may be partly attributable to underutilization or inadequate implementation of profiling strategies.

Discussions of Findings

This study examined the extent to which criminal profiling contributes to crime detection within the NSCDC Kano State Command by assessing awareness, techniques, effectiveness, challenges, and improvement strategies. The findings reveal a structured but uneven structure in which conceptual awareness of profiling exists, yet its operational deployment remains constrained by institutional and infrastructural limitations. The discussion below integrates quantitative findings, qualitative insights from Key Informant Interviews, hypothesis testing results, and recent scholarly contributions cited in the study.

The findings under Objective I indicate that although a majority of respondents demonstrated conceptual awareness of criminal profiling, operational familiarity with structured behavioural

and forensic profiling techniques was moderate. The regression result for Hypothesis One showed a statistically significant relationship between profiling awareness and crime detection efficiency ($\beta = \text{positive}$, $p < 0.05$), leading to the rejection of the null hypothesis. Field data showed that officers recognised profiling as important but admitted limited formal training and absence of dedicated behavioural units. This finding corroborates Adebisi and Olanrewaju (2021), who reported a gap between theoretical recognition and operational competence in Nigeria's criminal justice institutions. Similarly, Usman et al. (2023) found that awareness alone does not translate into investigative efficiency without institutional support structures. However, the cautious position of Snook et al. (2008), who warned against overconfidence in profiling without empirical validation, aligns with the present study's observation that awareness must be accompanied by methodological rigour. Thus, awareness in the NSCDC Kano Command is present but not yet systematised into a fully institutionalised investigative culture.

With respect to Objective II, which examined the techniques used in profiling and crime detection, findings revealed reliance on behavioural inference, suspect interrogation patterns, intelligence gathering, and limited geographic mapping. Advanced computational or machine-learning techniques were largely absent. The regression analysis showed that profiling techniques significantly predicted crime detection outcomes ($p < 0.05$), further reinforcing the rejection of the null hypothesis. This aligns with Santosuosso and Papini (2022) and Hanayama et al. (2024), who demonstrated that geographic profiling accuracy increases when sufficient data and structured modelling are available. However, the current findings reveal that the data thresholds required for such precision tools are not yet consistently met in the Kano Command. The study also aligns with Nwokonkwo et al. (2024), who showed that machine learning improves detection where data systems are robust, but whose findings equally stress the importance of digital infrastructure. In contrast, the caution by Fox and Farrington (2018) that profiling should be treated as a heuristic rather than a determinative science is reflected in this study's finding that profiling currently serves more as an investigative guide than as a statistically validated predictive instrument.

Objective III evaluated the effectiveness of profiling on crime detection outcomes. Quantitative results indicated that profiling contributed positively to suspect prioritisation, case linkage, and intelligence-led operations. Hypothesis Two testing confirmed that profiling significantly improves detection efficiency (R^2 indicating meaningful explanatory power, $p < 0.05$). Interview responses revealed that cases involving repeated patterns such as infrastructure vandalism or organised theft benefited more from behavioural linkage analysis. This supports the situational logic identified by Chainey and Tompson (2022), who emphasised the importance of mapping and spatial analysis in improving investigative focus. Furthermore, the dependency of profiling effectiveness on sufficient linked cases, as demonstrated by Hanayama et al. (2024), is mirrored in this study's finding that isolated incidents rarely benefit substantially from profiling tools. The findings also reinforce Nte et al. (2024), who highlighted infrastructural challenges in DNA and forensic profiling in Nigeria, indicating that behavioural profiling alone cannot substitute for integrated forensic systems.

The findings of this study are strongly supported by both Rational Choice Theory (Becker, 1968) and Routine Activity Theory (Cohen & Felson, 1979), as discussed in the theoretical framework. Rational Choice Theory explains how profiling enhances detection by enabling officers to reconstruct offender decision-making processes, target selection logic, and risk assessment strategies. Routine Activity Theory supports the observed emphasis on spatial mapping, guardianship gaps, and environmental vulnerabilities within Kano State. Together, these theories justify the empirical finding that profiling improves detection when situational awareness, behavioural interpretation, and institutional guardianship converge. The study therefore

demonstrates that criminal profiling within NSCDC Kano State Command possesses theoretical validity and empirical promise, but its full potential depends on systemic strengthening, technological integration, and professional capacity development.

Conclusions

This study examined the extent to which criminal profiling contributes to crime detection within the NSCDC Kano State Command by examining the awareness, techniques, effectiveness, challenges, and improvement strategies associated with criminal profiling within the NSCDC Kano State Command, and its overall influence on crime detection.

The findings established that although officers possess moderate conceptual awareness of criminal profiling, structured training and institutional standardisation remain limited. Awareness was found to significantly influence crime detection efficiency, indicating that knowledge of profiling enhances investigative reasoning and operational direction. However, awareness without systematic training and institutional reinforcement constrains its full operational impact.

The study further concluded that profiling techniques currently employed within the Command are largely intelligence-driven and experience-based, relying heavily on informant networks, behavioural observation, interrogation analysis, and basic crime pattern recognition. While these methods have demonstrated statistically significant contributions to crime detection, their effectiveness is moderated by the absence of advanced forensic infrastructure and integrated digital databases. Profiling, therefore, functions as a supportive investigative instrument rather than a fully institutionalised scientific framework within the Command.

In terms of effectiveness, the study confirms that criminal profiling significantly improves suspect prioritisation, investigative focus, and case linkage, particularly in recurring or patterned criminal activities. The statistical rejection of the relevant null hypotheses affirms that profiling contributes meaningfully to crime detection outcomes. However, its success is contingent upon consistency of application, quality of data, and availability of analytical support systems. Profiling yields stronger results when embedded within structured intelligence and coordinated investigative processes.

Recommendations

Following the conclusions above, the study put forth the following recommendations:

- i. In view of the finding that awareness of criminal profiling within the NSCDC Kano State Command is moderate but not systematically institutionalised, it is recommended that the Command should introduce structured and continuous professional training programmes specifically focused on behavioural analysis, forensic profiling, and intelligence-led investigation. Criminal profiling should be incorporated into the official training curriculum of the Corps, with periodic refresher courses for serving officers. Such training should move beyond conceptual discussions and include practical case simulations, analytical exercises, and exposure to contemporary profiling methodologies. Institutionalising profiling education will ensure uniform understanding across ranks and departments, thereby enhancing investigative consistency and operational competence.
- ii. Given that current profiling techniques are largely experience-driven and dependent on manual intelligence gathering, there is a need for strategic investment in technological infrastructure. The Command should develop and maintain a centralised digital crime database capable of storing, retrieving, and analysing crime patterns, offender histories, and geographic information. The adoption of basic crime mapping software and

- analytical tools will strengthen behavioural linkage analysis and suspect prioritisation processes. Digitisation of case files and record management systems will reduce data fragmentation and improve evidence-based decision-making during investigations.
- iii. Considering the finding that profiling significantly improves crime detection when properly applied, it is recommended that a specialised behavioural analysis or profiling unit be established within the Command. This unit should be staffed by officers with advanced training in psychology, criminology, intelligence analysis, and forensic methods. The unit would serve as a technical advisory body to operational teams, ensuring that profiling outputs are grounded in empirical evidence rather than assumptions. Such structural integration will enhance methodological rigour and reduce the risk of investigative misdirection.

Contributions to Knowledge

This study makes a significant contribution to knowledge by empirically examining the application of criminal profiling within the operational framework of the NSCDC Kano State Command, an area that has received limited scholarly attention in Nigeria's paramilitary and civil defence context. By quantitatively testing the relationship between profiling awareness, techniques, institutional challenges, and crime detection efficiency through regression and chi-square analyses, the study moves beyond descriptive assessments and provides statistical validation of profiling's influence on investigative outcomes.

The findings establish that criminal profiling significantly predicts crime detection efficiency, while institutional and technological constraints moderate its effectiveness. Furthermore, the integration of Rational Choice Theory and Routine Activity Theory within the Nigerian security context expands theoretical application to paramilitary investigative practice, thereby enriching criminological discourse with locally grounded empirical evidence.

The study also contributes methodologically by combining questionnaire data with Key Informant Interview insights, thereby offering a triangulated understanding of profiling practice within a developing institutional structure.

Problems Encountered and How They Were Overcome

During the course of the study, several challenges were encountered. Access to operational personnel and sensitive investigative information posed an initial limitation, as profiling practices are often considered confidential within security agencies. This challenge was mitigated through formal approval procedures, assurance of anonymity, and adherence to ethical standards, which encouraged candid participation from respondents.

There were also instances of respondent hesitation in providing detailed operational insights due to security concerns; this was addressed by clearly explaining the academic purpose of the research and restricting inquiries to procedural and structural aspects rather than classified case details. Logistical constraints, including scheduling interviews with officers engaged in active field operations, were managed through flexible appointment arrangements and phased data collection.

Additionally, limited availability of documented institutional data required reliance on self-reported practices, which was strengthened through triangulation of questionnaire responses with Key Informant Interviews to enhance reliability and validity.

Suggestions for Further Studies

- i. Future research should expand the scope of investigation beyond a single state command to include comparative analyses across multiple NSCDC state commands or other security agencies such as the Nigeria Police Force and the DSS. Such comparative studies would provide broader generalisability and allow for cross-institutional evaluation of profiling effectiveness.
- ii. Further studies may also adopt longitudinal designs to measure changes in crime detection efficiency following the introduction of structured profiling reforms or technological upgrades.
- iii. In addition, a qualitative case-study approaches focusing on specific crime categories such as kidnapping, banditry, cybercrime, or terrorism would provide deeper insight into the contextual applicability of profiling techniques.

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