



IJSKSRP

INTERNATIONAL JOURNAL OF SUVARNA KARNATAKA STUDIES AND RESEARCH PUBLICATIONS

CURRENT ISSUE | ONLINE/OFFLINE PRINT JOURNAL EDITION - 5 , 2026

Current Issue | Edition 5 | Volume 8 | Issue 8 | October-2026–
December-2026 | Multi Disciplinary Subjects Research Journal|DIP:-
|IF:-| ISSN NO:2583-7303|Approved Date:-15-05-2023.

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JOURNAL PARTICULARS

Title	INTERNATIONAL JOURNAL OF SUVARNA KARNATAKA STUDIES AND RESEARCH PUBLICATIONS
Frequency	Quarterly [LICENSED BY. MBCIT-GOVT.INDIA , UGC-CARE NMC- Aproved, Scopus Indexed Journal]
ISSN NUMBER .	2583-7303, Aproved date ;-15-05-2023.
Publisher	Suvarna karnataka integrated rural development society
Chief Editer	Prof.Dr.Shivalingaiah mallappa.
Copyright	IJSKSRP
Starting year	Edition 1 , Volume1 , Issue-1, October 2022-2023
Subject	Multidisciplinary Subjects
Language	English
Publication Format	Online (View Instruction to Authors)

Phone Number	94499 76451/94491 33684
E-mail	editor@ijsksrp.com ijsksrp2022@gmail.com
Website	https://ijsksrp.com
Publisher Address / Chief Editor Address	<u>Publisher Address :</u> Suvarna karnataka integrated rural development society Someswarapuram tumakuru-572102, karnataka india, Email: skirdsgo1997@gmail.com <u>Chief Editor Address :</u> Prof.Dr.Shivalingaiah mallappa. Professor and head. , dept.Of clinical psychology. Suvarna karnataka institute of studies and research center . No. 2 1st floor 6th cross, someswarapuram. Tumakuru-572102. Karnataka india, Email: ijsksrp2022@gmail.com

ORIGINAL RESEARCH ARTICLE

Criminal Profiling and Effective Crime Detection: An Assessment of Challenges and Improvement Measures in the NSCDC Kano State Command

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Abstract

Effective crime detection within paramilitary security institutions increasingly depends on the extent to which behaviourally-informed investigative tools, such as criminal profiling, are supported by adequate institutional structures. This study therefore examined the challenges affecting the effective use of criminal profiling and the measures required to improve criminal profiling for effective crime detection within the Nigeria Security and Civil Defence Corps (NSCDC), Kano State Command. Anchored on Rational Choice Theory and Routine Activity Theory, the study adopted a descriptive survey research design. The population comprised 250 operational and investigative personnel of the NSCDC Kano State Command, and since the population was relatively small, the entire population was studied as the sample size, using a multi-stage purposive sampling technique. Data

were obtained from 245 duly completed questionnaires (a 97% response rate) and Key Informant Interviews, and were analysed using descriptive statistics (frequency, percentage, mean and standard deviation) and multiple regression analysis. The results showed that lack of knowledge on profiling techniques (mean = 3.76), poor remuneration of personnel (mean = 3.70), and the high cost of profiling technologies (mean = 3.64) were the most significant institutional challenges undermining profiling in the Command, and that respondents were largely dissatisfied (58.7%) with the current profiling capability of personnel. Regression analysis testing the hypothesis that institutional challenges do not significantly hinder the application of profiling within the NSCDC was rejected ($R = 0.593$, $R^2 = 0.348$, $\beta = -0.593$, $p < 0.05$), confirming that institutional challenges significantly and inversely predict effective profiling application. With respect to improvement measures, respondents strongly endorsed conferences and workshops to enhance profiling skills (mean = 3.97), proper funding of the NSCDC (mean = 3.90), and provision of substantial profiling tools (mean = 3.80). The study concluded that the deficiencies confronting criminal profiling in the Command are largely structural rather than attitudinal, and that reversing them requires a coordinated programme of funding, technological investment and continuous professional training. It is recommended that the NSCDC Kano State Command establish a dedicated capacity-building framework, invest in digital profiling infrastructure, and strengthen inter-agency intelligence-sharing mechanisms to enhance the effectiveness of criminal profiling in crime detection.

Keywords: Criminal Profiling; Crime Detection; Institutional Challenges; Improvement Measures; NSCDC; Kano State

1. INTRODUCTION

1.1 Background to the Study

Crime detection in contemporary security environments increasingly demands intelligence-driven and behaviourally informed strategies rather than purely reactive enforcement approaches. Criminal profiling, understood as the systematic use of behavioural, psychological and situational evidence to narrow suspect pools and guide investigative decisions, has become an important complement to conventional policing methods (Turvey, 2011; Alison & Rainbow, 2021). Within Nigeria's paramilitary security architecture, the Nigeria Security and Civil Defence Corps (NSCDC) has statutory responsibility for the protection of critical infrastructure, community security and complementary crime-fighting functions, and has, in recent years, taken visible steps towards integrating forensic and behavioural capacities into its operations, including psychological and forensic evaluations of personnel across several state commands (Adebayo, 2021; Malik, 2021).

Nevertheless, the extent to which criminal profiling can meaningfully improve crime detection outcomes is not solely a function

of conceptual acceptance; it is shaped decisively by the institutional environment within which profiling is practised, including the availability of trained personnel, funding, forensic infrastructure, data systems, and inter-agency collaboration (Usman, Yunusa & Gomment, 2023; Forensic Science International: Synergy, 2024). Where these enabling conditions are absent or weak, profiling risks remaining an ad hoc, intuition-driven exercise rather than a structured investigative discipline. Understanding the specific challenges that constrain the effective application of profiling, and the measures capable of addressing them, is therefore central to improving crime detection performance in commands such as NSCDC Kano State Command.

This study focuses specifically on two dimensions of a broader investigation into criminal profiling and crime detection within the NSCDC Kano State Command: the challenges affecting the effective use of profiling, and the measures required to improve profiling for effective crime detection. In doing so, it isolates the structural and remedial components of the profiling process, providing an evidence-based account of what currently limits profiling effectiveness and what officers

themselves identify as the pathways to improvement.

1.2 Statement of the Problem

Despite growing recognition of the investigative value of criminal profiling, its practical application within Nigerian security agencies, including the NSCDC, continues to be undermined by a combination of operational, institutional, technological and legal constraints. Prior studies on profiling and criminal investigation in Nigeria have documented inadequate funding, poor remuneration of personnel, weak record-keeping systems, absence of centralised criminal databases, and limited professionalism as recurring impediments to effective investigative practice (Usman et al., 2023; Ojedokun&Akinola, 2022; Aborisade, 2023). Where such structural weaknesses persist, investigators tend to fall back on confession-driven approaches and random intelligence tips rather than structured, evidence-based profiling, a pattern that delays case resolution and increases the risk of misdirected investigations.

At the same time, while several scholars and institutional actors have proposed measures for strengthening profiling, ranging from

funding and technological investment to professional training and inter-agency collaboration, there remains limited empirical evidence, particularly from state commands such as Kano, on how personnel themselves rank and prioritise these measures, and on the statistical relationship between institutional challenges and the effective application of profiling. Without such evidence, policy responses risk being generic rather than targeted at the specific deficiencies confronting the Command. It is against this backdrop that this study sought to identify the challenges affecting the effective use of profiling in the NSCDC Kano State Command, and to unveil the measures required to improve criminal profiling for effective crime detection.

1.3 Objectives of the Study

The general objective of the study was to assess the role of criminal profiling in enhancing crime detection by the NSCDC Kano State Command. In line with the focus of this paper, the specific objectives were to:

- i. identify the challenges affecting the effective use of criminal profiling in the Kano State Command of NSCDC; and

- ii. unveil the measures to improve criminal profiling for effective crime detection by the NSCDC Kano State Command.

1.4 Research Questions

The study was guided by the following research questions:

- i. What are the challenges affecting the effective use of criminal profiling in the Kano State Command of NSCDC?
- ii. What measures can improve criminal profiling for effective crime detection by the NSCDC Kano State Command?

1.5 Hypothesis of the Study

The following null hypothesis, corresponding to the challenges dimension of the study, was formulated and tested:

H₀: Institutional challenges do not significantly hinder the application of profiling within the NSCDC.

1.6 Significance of the Study

The findings of this study are significant to the NSCDC Kano State Command and its management, as they provide an empirically

grounded diagnosis of the specific challenges undermining criminal profiling, together with a ranked set of measures that officers themselves consider necessary for improvement. The study is also valuable to policymakers within the broader Nigerian security sector, as it offers evidence to guide resource allocation, training curricula, and inter-agency collaboration frameworks. Furthermore, the study contributes to the growing body of literature on criminal profiling in Africa's developing security institutions and provides a reference point for comparative studies in other state commands and paramilitary agencies.

2. LITERATURE REVIEW

2.1 Conceptual Review

2.1.1 Criminal Profiling and Crime Detection

Criminal profiling refers to the systematic use of behavioural, psychological, geographic and forensic evidence to infer the likely characteristics, habits and identity of an offender, with a view to narrowing suspect pools and guiding investigative priorities (Turvey, 2011; Douglas, Ressler, Burgess & Hartman, 1986). Crime detection, in turn, denotes the process through which law enforcement agencies identify offenders, gather admissible evidence, and

resolve criminal cases (Ahmad, Rahman & Sulaiman, 2025). Profiling contributes to crime detection primarily by reducing the range of plausible suspects, supporting case linkage across related offences, and enabling investigators to reconstruct offender decision-making, target selection and modus operandi (Alison & Rainbow, 2021; Chainey & Tompson, 2022). Scholars caution, however, that profiling should be understood as an investigative heuristic that supports, rather than replaces, corroborative forensic evidence (Fox & Farrington, 2018; Snook, Cullen, Bennell, Taylor & Gendreau, 2008).

2.1.2 Institutional and Operational Challenges Affecting Criminal Profiling

A recurring theme in the Nigerian literature is that the principal obstacles to effective criminal profiling are structural rather than conceptual. Usman, Yunusa and Gomment (2023), examining criminal profiling and investigative challenges in the Nigeria Police Force in Kogi State, found that although mechanisms such as records management systems, forensic laboratories and central criminal databases exist, their operational effectiveness is seriously weakened by inadequate funding, poor remuneration, corruption and limited

professionalism among officers. Similarly, Ojedokun and Akinola (2022) documented investigative deficits and a persistent reliance on confession-driven policing in Nigeria, a pattern attributable to weak institutional capacity for evidence-based investigation. Continent-wide assessments, including the proceedings of the 4th DNA Forensic Symposium, have likewise stressed gaps in forensic infrastructure and database interoperability as key impediments to profiling in African jurisdictions (Forensic Science International: Synergy, 2024).

Beyond funding and infrastructure, scholars have also identified knowledge and training deficits, inadequate data management systems, manpower shortages, weak inter-agency collaboration, and community distrust as significant institutional constraints (Aborisade, 2023; Adebayo, 2020). These deficits mean that even where officers demonstrate conceptual awareness of profiling, their everyday investigative routines often lack the material and organisational support necessary to translate that awareness into improved detection outcomes. Collectively, this literature supports the theoretical expectation that institutional challenges bear a significant, and typically inverse, relationship with the

effective application of profiling within security agencies.

2.1.3 Measures for Improving Criminal Profiling for Effective Crime Detection

A parallel body of Nigerian scholarship has examined measures capable of strengthening criminal profiling and crime detection. Usman et al. (2023) specifically recommended the deployment of professional psychologists and forensic specialists to bolster investigative competence and credibility in profiling practice. Research on profiling practices in Benue State similarly found that limited resources and the absence of standardised procedures slow the adoption of effective profiling techniques, implying that expanding technical infrastructure and formalising procedures would materially improve outcomes (Shawulu&Iornumbe, 2023). In relation to forensic modernisation, Nte, Nte, Enokie and Bienose (2024) argued that reliance on traditional, testimony-based methods, rather than scientific evidence, contributes to low case-resolution rates, reinforcing the case for investment in modern forensic capability and specialist training.

National-level initiatives lend further support to this reform agenda: efforts to

upgrade the Nigeria Police's Crime and Incident Database and expand forensic laboratories illustrate the direction of institutional modernisation being pursued across Nigerian security agencies (Adejobi, 2022). Scholars examining intelligence-led policing have also emphasised information integration, technology utilisation and inter-agency cooperation as central to adapting policing practice to contemporary crime patterns (Okoru, Ibrahim &Sule, 2024), while Eze, Alabi, Ibrahim, Yusuf and Hamzat (2025) position forensic psychology as a critical link between behavioural science and investigative effectiveness, underscoring the value of embedding psychological training within law enforcement curricula. Taken together, this literature converges on a layered set of enablers, funding, technological investment, professional specialisation, and integrated intelligence frameworks, as the principal pathways for improving criminal profiling and, by extension, crime detection performance.

2.2 Theoretical Framework

2.2.1 Rational Choice Theory (RCT)

Rational Choice Theory, advanced by Becker (1968), is grounded in the

assumption that offenders make calculated decisions based on perceived benefits and costs, weighing the risks of apprehension, the likelihood of punishment, and the rewards associated with offending. The theory holds that situational factors, such as surveillance, police presence and likelihood of detection, can significantly influence the decision to commit crime. Applied to this study, RCT explains why institutional weaknesses matter: where the NSCDC lacks the funding, tools and trained personnel to make offender detection probable, the deterrent and detective value of profiling is diminished, and offenders' calculus of risk is correspondingly less constrained. Conversely, measures that strengthen institutional capacity, such as funding, tools and training, directly enhance the Command's ability to raise the perceived and actual likelihood of detection.

2.2.2 Routine Activity Theory (RAT)

Routine Activity Theory, proposed by Cohen and Felson (1979), holds that crime occurs when a motivated offender, a suitable target, and the absence of a capable guardian converge in time and space. Within this study, institutional and operational challenges, such as manpower shortages, weak databases and limited forensic

infrastructure, represent weaknesses in the Command's capacity to act as a "capable guardian." The theory therefore supports the expectation that addressing these institutional deficiencies, through the measures identified under Objective ii, strengthens guardianship capacity and, in turn, improves the effectiveness of profiling-based crime detection. Together, RCT and RAT provide complementary theoretical grounding for examining both the constraints on profiling (RAT's guardianship deficit) and the pathways to improvement (RCT's emphasis on raising detection risk through institutional investment).

2.3 Empirical Review

Empirical studies conducted within Nigeria's criminal justice and security institutions provide useful comparative evidence for this study. Usman et al. (2023), in a survey of the Nigeria Police Force in Kogi State, found that structural weaknesses, including inadequate funding, poor remuneration and corruption, significantly hindered the effectiveness of existing profiling-support mechanisms such as records management systems and forensic databases. Aborisade (2023) similarly reported that forensic capacity limitations continue to constrain investigative practice across Nigerian

policing institutions, with implications for the reliability of profiling-derived leads. Adebisi and Olanrewaju (2021), examining psychological profiling of violent crime in the Nigerian criminal justice system, found a gap between theoretical recognition of profiling and its operational competence, attributable in part to limited institutional support for training and resourcing.

On the improvement side, Shawulu and Iornumbe (2023) found that the adoption of standardised procedures and expanded technical infrastructure was associated with improved investigative outcomes in profiling-related cases in Benue State, while Okoru et al. (2024) demonstrated that intelligence-led, technology-supported policing reforms improved the timeliness and quality of information available to investigators. These studies collectively suggest that the relationship between institutional conditions and profiling effectiveness observed in other Nigerian jurisdictions is likely to hold within the NSCDC Kano State Command, thereby providing both theoretical and empirical justification for the hypothesis tested in this study and for the improvement measures examined under Objective ii.

3. METHODOLOGY

3.1 Research Design

The study adopted a descriptive survey research design, considered appropriate for obtaining an accurate portrayal of existing institutional conditions and personnel perceptions within a defined organisational context (Creswell & Creswell, 2018). The design supported the integration of quantitative data, generated through structured questionnaires, with qualitative insights obtained through Key Informant Interviews (KIIs), thereby enabling both the measurement of the extent of challenges and improvement priorities, and a deeper contextual understanding of the institutional realities underlying them (Bryman, 2016).

3.2 Study Area

The study was carried out in Kano State, located in the North-western region of Nigeria. As the most populous state in the country, with a dense metropolitan hub and extensive commercial activity, Kano presents a high-risk, high-density operational environment for the NSCDC, making it a suitable and policy-relevant setting for assessing the challenges and improvement needs of criminal profiling.

3.3 Population and Sample Size

The population of the study comprised all 250 operational and investigative personnel of the NSCDC Kano State Command across intelligence, investigation and enforcement units. Given the relatively small and accessible size of this population, the entire population of 250 was adopted as the sample size for the study.

3.4 Sampling Procedure

A multi-stage purposive sampling technique was employed. The 250 respondents were distributed across the three Senatorial Districts of Kano State (Kano Central, Kano North and Kano South). At the first stage, divisional offices within selected Local Government Areas were identified to ensure proportional representation. At the second stage, 16 respondents each were drawn from five specialised sub-units within the State Intelligence Department (Surveillance, Anti-Fraud, General Investigation, Forensic and Legal Units), totalling 80 respondents per Senatorial District (240 in all). An additional 10 participants were purposively selected from the Command Headquarters for Key Informant Interviews, completing the sample of 250.

3.5 Validity and Reliability of the Research Instrument

The questionnaire was subjected to face validity by the researcher's supervisor and two other experts in the field, while construct validity was established through Exploratory Factor Analysis, with all items returning factor loadings exceeding the acceptable threshold of 0.30. Reliability of the instrument was established through a pilot study conducted at the Katsina State Command of NSCDC, involving 30 respondents, using Cronbach's Alpha reliability coefficient. All constructs returned alpha coefficients above the generally accepted threshold of 0.70, confirming that the instrument was reliable for the main study.

3.6 Method of Data Analysis

Data obtained from the questionnaire were analysed using descriptive statistics, specifically frequency counts, percentages, means and standard deviations, to present the challenges affecting profiling and the measures proposed for its improvement. The hypothesis on institutional challenges was tested using multiple regression analysis, appropriate for determining the predictive influence and statistical significance of institutional challenges (independent variable) on the effective application of profiling (dependent variable), at a 0.05

level of significance. Qualitative data obtained from Key Informant Interviews were analysed thematically and used to triangulate and enrich the quantitative findings.

4. RESULTS AND DISCUSSION

A total of 250 copies of the questionnaire were distributed to respondents; 245 copies were duly completed, returned and used for analysis, representing a response rate of 97%. The analysis presented below focuses on the two objectives central to this paper: the challenges affecting the effective use of criminal profiling, and the measures required to improve criminal profiling for effective crime detection within the NSCDC Kano State Command.

4.1 Challenges Affecting the Effective Use of Criminal Profiling

Table 1: Challenges Affecting the Effective Use of Criminal Profiling in the NSCDC Kano State Command (N = 245)

Item	SD (1)	D (2)	Agree (3)	Strongly Agree (4)	Strongly Disagree (5)	Mean	Std. Dev.
Lack of knowledge on profiling techniques	18 (7.3%)	27 (11.0%)	139 (56.7%)	86 (35.1%)	82 (33.5%)	3.76	1.23
Poor remuneration of law enforcement personnel	22 (9.0%)	31 (12.7%)	61 (24.9%)	79 (32.2%)	52 (21.2%)	3.70	1.30
Nature and high cost of criminal profiling techniques	20 (8.2%)	34 (13.9%)	36 (14.7%)	79 (32.2%)	76 (31.0%)	3.64	1.27
Don't know	95 (38.8%)	78 (31.8%)	32 (13.1%)	25 (10.2%)	15 (6.1%)	2.13	0.97

Source: Field Survey Research (2026)

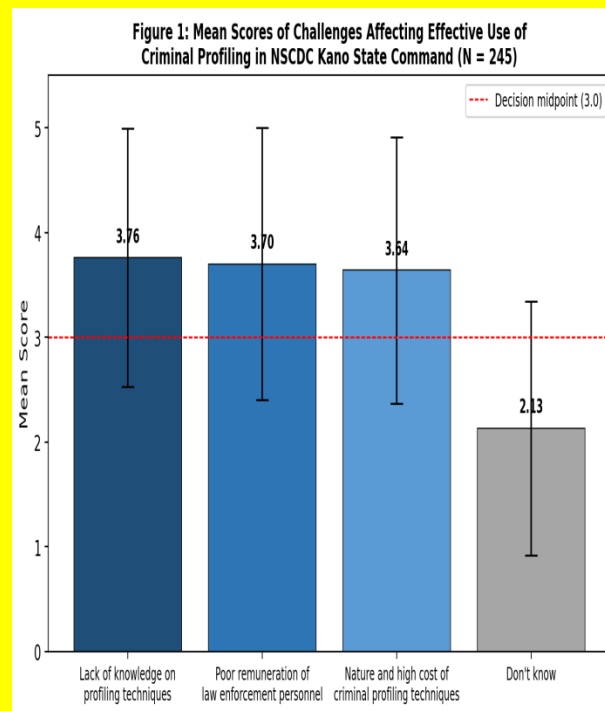


Figure 1: Mean Scores of Challenges Affecting Effective Use of Criminal Profiling (N = 245)

As shown in Table 1 and Figure 1, lack of knowledge of profiling techniques emerged as the most significant institutional constraint, with a combined 168 respondents (68.6%) agreeing or strongly agreeing that inadequate knowledge limits effective profiling (mean = 3.76, SD = 1.23). Poor remuneration of law enforcement personnel

followed closely, with 163 respondents (66.6%) in agreement (mean = 3.70, SD = 1.30), while the nature and high cost of profiling techniques was affirmed by 155 respondents (63.2%) (mean = 3.64, SD = 1.27). By contrast, the "don't know" category recorded an overwhelming disagreement (173 respondents, 70.6%;

mean = 2.13), indicating that respondents held clear, informed positions on the

Item	1 (SD)	2 (D)	3 (N)	4 (A)	5 (SA)	Mean	Std. Dev
Capability of NSCDC personnel in profiling and detecting crime	21 (8.6%)	38 (15.5%)	42 (17.1%)	79 (32.2%)	65 (26.5%)	3.53	1.27

fronting profiling rather than uncertainty.

These findings indicate that operational inefficiencies in profiling are less a function of personnel unwillingness than of training gaps, welfare deficiencies, and resource constraints. This corroborates Usman et al. (2023), who identified poor remuneration, inadequate funding and limited professionalism as key impediments to profiling-support mechanisms in the Nigeria Police Force, and aligns with the continental gaps in forensic infrastructure documented by the 4th DNA Forensic Symposium (Forensic Science International: Synergy, 2024).

Table 2: Satisfaction with the Capability of NSCDC Personnel in Profiling and Detecting Crime (N = 245)

Source: Field Survey Research (2026)

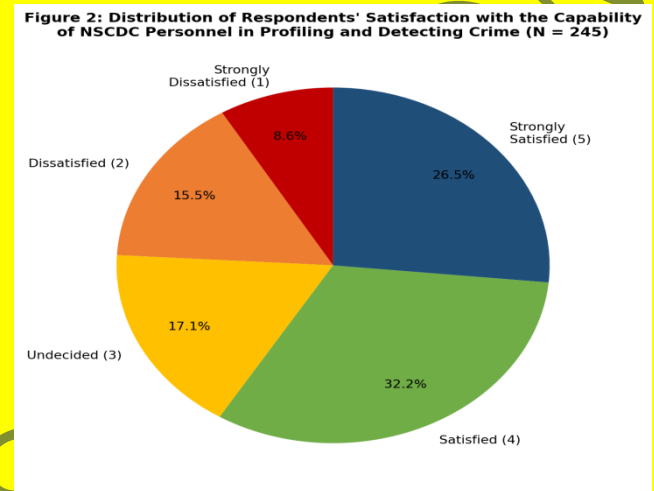


Figure 2: Distribution of Respondents' Satisfaction with the Capability of NSCDC Personnel (N = 245)

Table 2 and Figure 2 show that when categories 4 and 5 are combined, 144 respondents (58.7%) expressed dissatisfaction with the current capability of NSCDC personnel in profiling and detecting crime, against 59 respondents (24.1%) who expressed satisfaction, with a mean of 3.53 (SD = 1.27) tilting towards the dissatisfaction end of the scale. This convergence between perceived institutional challenges and dissatisfaction with personnel capability reinforces the argument that capability concerns reflect institutional limitations, chiefly inadequate knowledge, poor remuneration and limited technological

Item	SD (1)	D (2)	U (3)	A (4)	SA (5)	Me an	St d. D ev
Proper funding of the NSCDC	15 (6.1 %)	20 (8.2 %)	30 (12.2 %)	90 (36.7 %)	90 (36.7 %)	3.9 0	1.16
Provision of substantial profiling tools	18 (7.3 %)	22 (9.0 %)	35 (14.3 %)	85 (34.7 %)	85 (34.7 %)	3.8 0	1.21
Conferences and workshops to enhance profiling tools	12 (4.9 %)	18 (7.3 %)	28 (11.4 %)	95 (38.8 %)	92 (37.6 %)	3.9 7	1.11
No idea	95 (38.8 %)	80 (32.7 %)	30 (12.2 %)	25 (10.2 %)	15 (6.1 %)	2.1 2	1.21

support, rather than an indictment of individual officers.

4.2 Measures to Improve Criminal Profiling for Effective Crime Detection

Table 3: Measures for Effective Criminal Profiling and Crime Detection in the NSCDC Kano State Command (N = 245)

Source: Field Survey Research (2026)

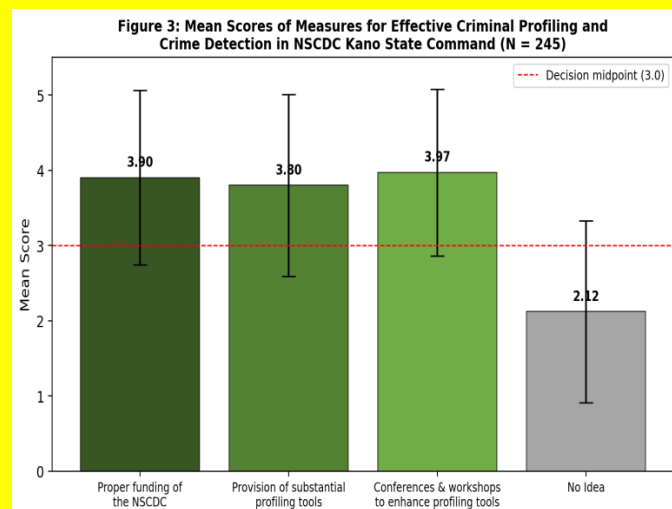


Figure 3: Mean Scores of Measures for Effective Criminal Profiling and Crime Detection (N = 245)

Table 3 and Figure 3 show that conferences and workshops to enhance profiling skills recorded the highest endorsement, with 187 respondents (76.4%) in agreement (mean = 3.97, SD = 1.11), followed by proper funding of the NSCDC, endorsed by 180 respondents (73.4%) (mean = 3.90, SD = 1.16), and provision of substantial profiling tools, endorsed by 170 respondents (69.4%) (mean = 3.80, SD = 1.21). The “no idea” category again recorded strong disagreement (175 respondents, 71.5%; mean = 2.12), confirming that respondents held clear and considered views on the reforms required.

The pattern of responses presents a coherent reform narrative: measures tied to professional training, funding and technological provisioning all attract majorities exceeding two-thirds of the

sample, with comparatively moderate standard deviations indicating consistency of opinion. This is corroborated by Key Informant Interviews, in which officers recommended structured training programmes in behavioural analysis and forensic profiling, investment in digital crime databases and analytical software, formalised inter-agency intelligence-sharing platforms, and community trust-building initiatives. These recommendations align closely with Eze et al. (2025), who underscore the value of integrating psychological science into investigative training, and with Okoru et al. (2024), who stress intelligence-driven and technology-supported policing reforms. Consistent with Shawulu and Iornumbe (2023), the findings suggest that any reform agenda that isolates funding, tools, or training while neglecting the others is unlikely to produce enduring improvement in profiling effectiveness.

4.3 Test of Hypothesis

H₀: Institutional challenges do not significantly hinder the application of profiling within the NSCDC.

This hypothesis was tested using multiple regression analysis, with institutional challenges as the predictor variable and

effective application of criminal profiling as the outcome variable.

Table 4: Regression Model Summary for Institutional Challenges and ProApplication

Source: Field Survey Research (2026)

Table 5: Regression Coefficients for Institutional Challenges and Profiling Application

Model	R	R Square	Adjusted R Square	F	Sig.
1	0.593	0.348	0.345	129.77	0.000

Variable	B	Std. Error	t	Sig.
Institutional Challenges	−0.63	0.055	−11.39	0.000

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

The regression analysis produced an R value of 0.593 and an R² value of 0.348, indicating that approximately 34.8% of the variance in the effective application of profiling within the NSCDC is explained by institutional challenges. The model was statistically significant ($F = 129.77$, $p < 0.05$). The standardised beta coefficient was negative and statistically significant ($\beta = -0.593$, $t = -11.39$, $p < 0.05$), indicating an inverse relationship: as institutional challenges increase, the effective application of profiling decreases. Consequently, the null

hypothesis is rejected, confirming that institutional challenges significantly hinder the application of criminal profiling within the NSCDC Kano State Command.

This finding is consistent with Usman et al. (2023), who identified record-keeping deficiencies and institutional weaknesses as key impediments to profiling in the Nigeria Police Force, and with the continental gaps in forensic infrastructure highlighted by the 4th DNA Forensic Symposium (Forensic Science International: Synergy, 2024). It also corroborates Ojedokun and Akinola (2022), who documented investigative deficits and overreliance on confession-driven policing arising from weak institutional capacity. The negative beta coefficient illustrates that systemic deficiencies, such as poor funding, limited technical resources and inadequate training, actively suppress the operational utilisation of profiling methods, reinforcing the theoretical expectation, drawn from Routine Activity Theory, that weak institutional guardianship undermines effective crime detection.

4.4 Discussion of Findings

The findings under the challenges objective revealed that operational and institutional

constraints, particularly limited knowledge of profiling techniques, poor remuneration, and the high cost of profiling technologies, were statistically significant predictors of reduced profiling effectiveness. Qualitative accounts from Key Informant Interviews reinforced this pattern, with informants citing limited forensic infrastructure, insufficient training, absence of centralised criminal databases, legal constraints on data access, manpower shortages, and community distrust as compounding operational challenges. These findings strongly corroborate Usman et al. (2023) and align with the proceedings of the 4th DNA Forensic Symposium (Forensic Science International: Synergy, 2024), both of which highlight infrastructural and institutional gaps as central barriers to effective profiling in African and Nigerian contexts. They also align with Ojedokun and Akinola (2022), who documented an overreliance on confession-driven policing as a symptom of weak investigative capacity, a pattern this study observed as a lingering practice within some NSCDC units.

With respect to improvement measures, both survey responses and interviews converged on the need for structured behavioural training, digital case-management systems,

provision of profiling tools, and inter-agency intelligence integration. These recommendations align closely with Eze et al. (2025), who underscore the importance of integrating psychological science into investigative training, and Okoru et al. (2024), who stress intelligence-driven and technology-supported policing reforms. They further support Shawulu and Iornumbe (2023), who found that standardised procedures and expanded technical infrastructure improve profiling-related investigative outcomes. Overall, the discussion suggests that profiling effectiveness within the NSCDC Kano State Command is moderated not by conceptual inadequacy but by systemic and organisational limitations, a conclusion consistent with both Rational Choice Theory, which links detection risk to institutional capacity, and Routine Activity Theory, which links guardianship capacity to the presence of trained personnel, tools and coordinated systems.

5. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

This study examined the challenges affecting the effective use of criminal profiling and the measures required to

improve criminal profiling for effective crime detection within the NSCDC Kano State Command. The findings established that institutional and operational challenges, particularly limited knowledge of profiling techniques, poor remuneration, and the high cost of profiling technologies, significantly and inversely predict the effective application of profiling, leading to the rejection of the null hypothesis. Correspondingly, respondents were largely dissatisfied with the current profiling capability of personnel, a dissatisfaction that mirrors the structural deficiencies identified. On the question of improvement, the study concludes that strengthening criminal profiling within the Command requires deliberate institutional reform, technological modernisation and professional capacity building, with respondents ranking conferences and workshops, adequate funding, and provision of profiling tools as the most critical measures. Criminal profiling therefore possesses demonstrable potential within the NSCDC Kano State Command, but its transformative capacity depends on sustained institutional investment rather than conceptual endorsement alone.

5.2 Recommendations

Based on the findings, the following recommendations are made:

- i. The NSCDC Kano State Command should introduce structured and continuous professional training programmes focused on behavioural analysis, forensic profiling and intelligence-led investigation, incorporating criminal profiling into the official training curriculum with periodic refresher courses for serving officers. The Command should prioritise the mobilisation of adequate funding to support profiling operations, including budgetary provisions for forensic equipment, analytical software, and welfare packages that address poor remuneration.
- ii. The Command should invest in the provision of substantial and modern profiling tools, including a centralised digital crime database capable of storing, retrieving and analysing crime patterns, offender histories and geographic information. The Command should strengthen partnerships with sister security agencies through formal intelligence-sharing frameworks and

joint investigative task forces, to address weak inter-agency collaboration and data fragmentation identified in the study.

- iii. The Command should establish a specialised behavioural analysis or profiling unit staffed by officers with advanced training in psychology, criminology and forensic methods, to serve as a technical advisory body ensuring that profiling outputs are grounded in empirical evidence.

5.3 Suggestions for Further Studies

Future studies could adopt a comparative design across multiple NSCDC state commands to assess whether the pattern of institutional challenges and improvement priorities observed in Kano State holds in other operational contexts. Longitudinal studies evaluating the impact of specific interventions, such as the establishment of a specialised profiling unit, on crime detection outcomes over time would also strengthen the evidentiary basis for the recommendations made in this study.

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Current Issue | Edition 5 | Volume 8 | Issue 8 | October-2026–December-2026 | Multi Disciplinary Subjects Research Journal | DIP:- | IF:- | ISSN NO:2583-7303 | Approved Date:-15-05-2023
