Open Access Print ISSN: 2992-6114 Online ISSN: 2992-5770

NEWPORT INTERNATIONAL JOURNAL OF CURRENT ISSUES IN ARTS AND MANAGEMENT (NIJCIAM)

Volume 4 Issue 2 2024

https://doi.org/10.59298/NIJCIAM/2024/4.2.7114119

An Assessment of the Nigerian Military Performance in Combating Armed Banditry: A Sociological Review of the Scenario in Birnin Gwari Local Government of Kaduna State (2015-2023)

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ABSTRACT

The widespread occurrence of armed banditry and the resulting risks to human security have become a matter of national security concern. The Nigerian military has been sent for domestic operations in the majority of localities, and they are being aided by international endeavours. They have greatly reduced the ability of the armed criminals. The objective of this study was to assess the Nigerian military's capacity to effectively address the issue of armed banditry in the Birnin Gwari Local Government Area, located in the Central Senatorial District of Kaduna state. The paper's theoretical framework is Situational Choice Theory (Situational Crime Prevention). The research used a survey design for data collecting and employed qualitative methods for analysis. The Nigerian military has established a military operation called "Operation Whirl Punch" in Birnin Gwari to address the issues of murders, abduction of farmers and travellers, obstruction of local trade routes and theft of animals and crops. Ultimately, it is essential to establish a well-organised system of community policing and civil-military collaboration. Therefore, this article proposes the implementation of a novel security framework, along with the formulation of employment generation strategies. Additionally, it is suggested that the military should transition from their present defensive approach in combating criminals to an offensive one by integrating elements of Stealth, Surprise and Speed into all of their operations. The military should be equipped with state-of-the-art technology and essential logistical support, while also having access to reliable and useful information.

Keywords: Assessment, Banditry, Combating, Military, and Performance

INTRODUCTION

Nigerian Army (NA) which was formed date back to the era of West African Frontier Force established in 1900, had officially recognized and became a sovereign institution by 1960 with the attainment of political independence. This definitive body with primary assignment to protect the territorial integrity of the nation have been engaged in both national and international operations with the objective to maintain peace and political stability. [1] Section 34 (5) of the Terrorism (Prevention) Act 2011 as amended, make it imperatives for the Nigerian military to crush terrorists or bandits disturbing the peace and security of the nation [2]. Where the state is too weak to be dangerous, nonstate actors might become too strong. Insecurity in the last eight years has claimed lives than at any other equivalent time frame in peace time in Nigeria. For the first time since the creation of the 774 local government areas, 550 of them are enveloped by insecurity, hit by terrorism, banditry, kidnapping or separatists' insurgency. In response, the Nigerian military has been actively involved in the combat of these violent groups in 33 out of 36 states that make up the federation [3]. The security landscape of the northern region of the country is currently being out-turned by different criminal's groups with strong allegiance to continue to terrorize the locals who are apparently helpless and vulnerable (without noticeable protection from the state.) obviously, from northeast, to the northwest, and down to north-central, different armed groups (bandits, killer herdsmen, terrorists) have demonstrated strong resistance viz a viz the intervention of the military and their operations [4]. Birnin Gwari has become the most dreaded part of Kaduna state with daily killings, kidnap of innocent persons passing through the area and other inhuman activities.

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The Birnin Gwari Emirate Progressive Union, (BEPU) has expressed concern over the destruction of lives and property in the area by armed bandits. The apparent neglect and inaction by government, have left the natives with no choice than to relocate from the theatre of war and seek for safer locations to pitch their tents in order to save their lives. Birnin Gwari local government area, is being considered by internationally connected terrorists as their new operational base after being dislodged from the Northeast [5]. The increased deployments of Nigerian Army troops in various theatre of operations across the country as well as creation of new units and forward operating bases have provided the much-needed impetus in our operations with several successes recorded. The acquisitions and deployment of armoured tanks and other military hardware and the synergy with other military arms and security agencies changed the tide of war in the northwest [6].

The Nigerian military made a genuine move to identify the hideouts of bandits. This has been sustained thus far, with periodic raids by the military to secure the lives and property of the residents in Birnin Gwari, and to strengthen that resolves the government recently donated state-of- the art security gadgets and facilities to the armed forces. To boost their performances, related facilities such as vehicular radio communication gadgets, security gadgets with bullet proof vests and hand- curves were also provided [7]. This falls in tandem with section 14(2) of the 1999 constitution which states that the primary purpose of government is to guarantee the security and ensure the welfare of the citizenry. Security has evolved to largely encompass developmental issues, which now involves more holistic approaches that could be non- kinetic and essentially strategic in nature, beyond the mere prosecution of armed solutions and deployment of boots on the ground in counter attack operations. The non-military strategy to counter insurgency was to complement, not replace efforts of troops in fighting banditry. The soft approach strategy identifies poverty, social injustice, isolation and sectarianism are among the causes of insurgency [8]. [9], argues the capacity of an Armed force to manoeuvre, gain access to a threat area, and secured in both control and in the military's mission, to have superiority over the threat area. The acquisition and development of more sophisticated, adequate and appropriate military hard wares propel Nigerian military operate beyond borders to hunt fleeing bandits, thus removing their safe haven.

Research Objectives

- 1. To examine the capability of the Nigerian military in combating the menace of armed banditry in Birnin Gwari
- 2. To identify the challenges facing the Nigerian military in combating the armed banditry
- 3. To identify the consequences of armed banditry on residents in Birnin Gwari
- 4. To identify and describe measures of prevention and control against armed banditry in Birnin Gwari

Statement of the Research Problems

Military were overstretched and overwhelmed, there is a problem with job description in the security sector. Most of the issues of insecurity in the Birnin Gwari are normally those of effective policing of the rural and urban areas and the efficient deployment of intelligence [10]. The conduct of military operations has been plagued by obstacles, such as the lack of harmonized doctrine and inadequate joint training at the rank-and-file levels. This has contributed to lack of trust and respect by preventing the development of common objectives, grasp of security operations and appropriate expertise. The military are grossly understaffed, ill-equipped and poorly motivated to confront the monstrous terrorists. Nigerian military lacks the full gamut of specialized equipment (lethal and non-lethal) to deal with lower levels of stabilization and nation building, and the complexity of the operating environment. Range of military operation involves the superior exhibition of risk and adaptability [11]. This is so since range of military operation is often carried out in an environment where cause and effect are often indiscernible, where traditional responses often fail, and solving problems requires new ways of thinking. Some communities in Birnin Gwari are in shambles because of the activities of these criminals, many can no longer go their farms, some frustrated residents have relocated, they also burnt scores of houses. Bandit's operation not only has this affected farming, residents are migrating in large numbers to other areas, severally villages have been deserted $\lceil 12 \rceil$. The bandits enforce the payment of tributes to farm or harvest crops, collect taxes, kidnap for ransom, and kill randomly. There is no single day that passes prior to Nigerian military intervention without an ugly incident of attacks and massacre in rural communities or mass abductions of people in both rural communities and suburbs of urban areas. These ceaseless attacks have continued to leave in their trail tales massacre, maining, destruction of property and crops, and mass displacement of person from their homelands [12]. The bandits have dominated many villages and rendered over 50,000 people in the area homeless, they go about wielding AK47 rifles to attacked villages burnt houses and grains stock of the affected villages. Many families' member of victims of insecurity are suffering from post-traumatic stress disorder. Attacks, killings, arson and forcible occupation of land by herdsmen and militia have been unrelenting in Birnin Gwari with occasional reprisal attacks by the traumatized residents. Lack of motivation, equipment and locals spying on military revealing their movement endangers their lives and ability to combat effectively. The security architecture proves incapacitated and or reluctant to decisively and resolutely deal with the problem $\lceil 13 \rceil$.

METHODOLOGY

The methodology was based on triangulation which involves studying the phenomenon from various standpoints and taking advantage of variety of methods and techniques in data generation. The primary source of data is through Qualitative and Quantitative data, using Key Informant Interview, and questionnaire with residents and key actors in charge of the security in the area. Exploratory research was used to investigate the problem, because it allows to explore options to clarify the exact nature of the problem to be solved. Birnin Gwari LG is one of the twenty-three local government areas in Kaduna state. There are eleven political wards in Birin Gwari, comprising Dogo Dawa, Damari, Kakangi, Randagi, Layin Mahuta, Tabanni, Kuyelo, Kulemeshi, Gobirawa, Sabon Layi, and Badimi. This study will focus on the time frame of (2015-2023) because this period witnessed the peak of armed banditry. Birnin Gwari has an area of 6185Km² and a population of 252,363 at the 2006 census. The population of the study comprised of members of Emirate Council, Chairman and members of vanguard for security and good governance, staff of Birnin Gwari local government, vigilantes, community leaders, and military personnel of "Operation Whirl Punch" based in Brinin Gwari. The purposes for selecting the target audience are to gather comprehensive information based on facts. Secondly, some of the respondents are key actors monitoring the security situation in the community with first-hand information and antidote to the banditry. The sampling technique used was multi-stage sampling, five clusters (which are equivalent to wards) were selected in the study area, questionnaires was administered, including the Birnin Gwari headquarter. Purposive sampling technique was used to select five clusters (wards) Dogo Dawa, Damari, Tabanni, Kuyello and Kulemeshi from the eleven clusters (wards) based on the facts that some clusters are prone to bandit attacks than others. Simple random sampling technique was used in selecting the respondents, 10 respondents from each of the five-cluster totaling 50 respondents and 10 respondents from Birnin Gwari headquarter. Within the selected respondents irrespective of gender was administer questionnaire. Equal numbers of respondents were chosen from the selected clusters because of the homogeneity of the population. The size of the sample drawn for the study is (65) respondents comprising both for the quantitative sample (60) Questionnaire, and qualitative sample (5 KIIs).

Conceptual Review

Assessment: Success in range of military operation connects with the extent of military power and the degree of military force. In general, standards of assessment of degrees of success and failure are determined by the goals that action postulate when entering the conflicts, ones modified later to deflect domestic criticisms of failure [12].

Nigerian Military

According to Ministry of Defence Information Unit, Nigerian military is one of the largest uniformed combat services in Africa, trained to maintain, by timely and effective military action, to support and defend the constitution of Federal Republic of Nigeria against all enemies, foreign or domestic. Nigerian military promote national unity by ensuring the society and the people around are safe. Military approach to tamed terrorist, banditry and other criminals is both kinetic and non-kinetic.

Performances

To do something, especially something difficult or useful. How well or badly a person, institution does a particular job or activity. The act of doing a piece of work, duty etc., of the performance of his official duties. Re-equipping and increased deployments of troops have placed the Nigerian military in a better stead to confront security challenges facing the state.

Combating

Combating incorporates the practice, military tactics, techniques, and strategy that governments, military, law enforcement and intelligence agencies use to combat terrorism. Trying to stop something bad from happening or getting worse. The ability of the military to succeeds at any assigned mission in its range of operations. Accomplishment is also measured via three interconnected criteria: the ability to destroy hostile forces while preserving one's own; the ability to take and hold ground; and the time required to do so [13].

Armed Banditry

[14] argues banditry is reflected in criminal escapades like cattle rustling, kidnapping, armed robbery, arson, rape, village raids as well as high way raids which involves the use of force to intimidate a person or a group of persons in order to rob, kidnap or kill the victims and the brazen and gruesome massacre of people of agrarian herdsmen.

Empirical Review:

Capabilities of the Nigerian Military in Combating the Menace of Armed Banditry

In response to Birnin Gwari's deteriorating security, the Nigerian military established a special military task force code, "Operation Whirl Punch" (OPWP) in 2018 to combat armed banditry, cattle rustling, kidnapping, armed robbery and other form of criminality along Kaduna -Birnin Gwari and it environs. [14] argues that the Nigerian military has been a genuine factor in crisis management in Nigeria since independence. He argues that the tactics employed by the Nigerian military in internal security are informed by three basic considerations; the principle of the use of minimum force; enemy equipment holding, his operational methods and habits; and the topography of the enemy's location. With the re-engineering of the security architecture, the acquisition of more platforms, mobile

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platforms, and of course, technology that will be useful in resolving social problem of banditry. Continuous reappraisal of strategies and operational tactics and methods of intelligence gathering and sharing would effectively deal with security challenges [15]. What is direly needed now is a "concrete analysis of a concrete situation" for the ultimate purpose of action, the Nigerian military made a genuine move to identify the hideouts of bandits and flush them out of the conclave. This has been sustained thus far, with periodic raids by the military to secure the lives and property of residents in those troubled areas. And to strengthen that resolves the government recently donated state of the art security gadgets and facilities to the armed forces. To boost their performances, related facilities such as vehicular radio communication gadgets, security gadgets with bullet proof vests and hand-curves were also provided [16].

Challenges facing the Nigerian Military in Combating Armed Banditry

In terms of major challenges facing NA, the former Chief of Defence Staff (CDS) [8], submitted that a number of challenges militate against the operational capability of the NA in the performance of their constitutional duty of assisting the civil authority in Internal Security Operations (ISO). These challenges include, inadequate manpower, dearth of military hard ware, logistics, and porous border. Military has managed to adopt its conventional war fighting equipment to fight the new war it faces. The equipment needs of NA include main battle tanks, Armoured Personnel Carriers, Mine Resistance and Ambush protected vehicles. Most of this equipment are now in state of despair. Military was not trained for civil unrest, it is working hard to adapt in order to play the new role and curtail cases of insecurity. Military has been stretched to its very limit by the cases of banditry [10].

Consequences of Armed Banditry on Residents of Birnin Gwari

Birnin Gwari has become the most dreaded part of Kaduna state with daily killings, kidnap of innocent persons passing through the area and other inhuman activities. The apparent neglect and inaction by government, have left the natives with no choice than to relocate from the theatre of war and seek for safer locations to pitch their tents in order to save their lives. The bandits pick villages at random, both thickly and sparsely populated communities have been attacked [11].

Sociological Review

The three different perspectives used for an assessment of Nigerian military performance in combating armed banditry; Structural functionalism; Structural Conflict and Symbolic Interactionism.

Structural Functionalism: [13] argues that society has a reality of its own over and above the individuals who comprise it. Members of society are constrained by social facts, by ways of acting, thinking, and feeling, external to the individual and endowed with a power of coercion, by reason of which they control him. Without the consensus, social solidarity will be impossible and individual could not be bound together to form an integrated social unit. Social ills e.g., crime and deviance, have disabling effects on society and gradually effect other parts. [15], argues that destructive forces exist in every society. Social control can best be observed when such measures which are against these systems are fully checked this will help in maintaining equilibrium. In case there is no proper regulation, there is every possibility that social structure may come under heavy strains and interests of weaker sections of society may be ignored. He views society as a system with four basic functional pre-requisites, Adaptation, Goal Attainment, Integration, and Pattern Maintenance. These can be seen as problems which society must solve if it is to survive. [14] contends that as an agent of social control, the military is part of structural network of control, which binds society, and orders the individual and the group, regulates the conducts of members of a society. Criticism of structural functionalism; according to functionalist, human behaviour is portrayed as determined by the system. Man is pictured as an automation, programmed, directed and controlled by the system.

Structural Conflict

[13], argued that it is not the consciousness of men that determines their existence, but their social existence that determines their consciousness. Marx looks at the social problems as the short coming of individuals rather than the flaws of society. [10], argues that conflict is instinctual for us, so we find it everywhere in human society. Internal conflict in the larger social system creates norms for dealing with conflict, and develop lines of authority and judiciary system. Thus, a society must always contend with the psychological need of individuals to engage in conflict. Military as line of authority is more efficient in terms of response time to danger, regulating internal stresses and needs, negotiating external relations, and so on.

Symbolic Interactionism: Advocated by [10], the basic notion of symbolic interactionism is that human action and interaction are understandable only through the exchange of meaningful communication or symbols. Hence armed banditry constitutes as nuisance to the society, through their communications to wreaked havoc on the residents, military are drafted to the areas of banditry to checkmate the human actions contrary to the norm and values of the society.

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Theoretical Framework Situational Choice Theory (Situational Crime Prevention)

In this study, Situational Choice Theory (Situational Crime Prevention) by [6], was used to explain an assessment of the Nigerian Military performance in combating armed banditry in Birnin Gwari LG of Kaduna state. The theory holds that crime is not simply a matter of motivation, it is also a matter of opportunity. The theory informs on how armed bandits are motivated by crime opportunity, strategic approach, risk and reward factor. If opportunity ceases and surrounding environments improve, there will be most likely no crime opportunity for the offender. Situational crime prevention focuses on the settings where crime occurs, rather than on those committing specific criminal acts. Situational crime prevention aims to increase risk and or minimize reward, thus making either the commission of a criminal act too difficult, or the reward for committing the act too low to risk being caught. Increased risk can be achieved by minimizing the number of suitable targets or adding "capable guardians." Military personnel are the 'safe guardians' who can thwart the operations of the bandits as theorized by the Cornish and Clarke. The theory fails to explain the aggressiveness and anger that some criminals show when committing their crimes, suggesting something more than an absence of self-control. The theory disregards the individual's morality and psychology. But focuses on the performance of criminal behaviour, situational prevention attacks symptoms and not underlying, systemic causes [8].

Data Interpretations

Findings from both the quantitative and qualitative data analyzed established that military are capable in combating armed bandits. The troops conducted series of ambushes, clearance operations as well as cordon and search operation in different location. Each encounter, troops engaged and subdued the criminals, recovered livestock, arms and ammunition, including AK 47 rifles locally- made pistols, Dane guns and several rounds of 7.62mm ammunition [11]. The tactics used by the men and officers turned the table against the bandits as the battle has been brought to their dens and hide out. Bandits riding on motor bike in convoys under the cover of thick forests to launch heartless attacks on sleeping villagers, rustling livestock and barns and the kidnapping of people for ransom have been stopped by the joint military operations. Military personnel executed several "concurrent kinetic and nonkinetic operations in Birnin Gwari. Troops thwarted several criminal activities and rescued kidnapped victims while some kidnappers were arrested. This finding support the position of structural functionalist perspective views, the military and the entire criminal justice system as the representative of social consensus on what type of behavior is acceptable. The Nigerian military enforced shared values and norms of the whole society than the norms of a particular group. From the analysis of both the quantitative and qualitative approach, it was affirmed that military performance was marred with challenges, the conduct of joint training has been plagued by obstacles, no commitment, poor deployment, poor funding and poor tactics [13]. It was gathered that the performance of "Operation Whirl Punch" was an average performance. Although, the Key Informant Interview (KIIs), the military officers considered their performance as satisfactory going by the past antecedents prior to their operations in Birnin Gwari. From the analysis of quantitative and qualitative approach, it was asserted that the operation of armed bandits affected the livelihood of Birnin Gwari residents. Bandits extracting protection levies and similar taxes from farmers and communities, in return for permission to cultivate their farms. Constant attacks on communities had paralyzed economic activities in their rural areas and made travelling in the area impossible. Different types of taxes were paid to bandits to enable them access their farms, and some cases farm harvests of all assorted grains were shared with them, and these has been going on for sometimes [10]. Farming has been disrupted, transporting goods and passengers is unsafe and prohibitively expensive, and the economies of the area are vastly atrophied. From the bivariate analysis, there is a relationship between the Nigerian military performance and motivation. It was affirmed from the bivariate analysis that soldiers struggled to be at their best on the front line because they are poorly motivated, from the cross tabulation their performance was not satisfactory, due to poor motivation.

DISCUSSION OF MAJOR FINDINGS

A key factor is to tackle the root causes and stem degeneration into social disorder and instability. The high level of unemployment and poverty among Nigerians, especially the youths, has consistently attracted them to crimes. Failure to address challenges of poverty, unemployment, and cattle rustling is one of the major factor fueling insecurity in the state. The welfare of the Nigerian military at the front line in Birnin Gwari should be critically reviewed to bring things up to the satisfactory level. The degree of equipment and kitting should be examined in the light of the yearly budgetary releases to the defense and security sector. The need for better training, better equipment, smarter intelligence gathering, higher weaponry, better logistics and cutting –edge technology. "The need for promoting the concept of community based Intelligence- led Policing (ILP) on the premise that all crimes are usually hatched, planned and executed within the community."

CONCLUSION

In conclusion, Peace building strategies to be implemented to address the underlying causes of bandits, government should address widespread poverty, social inequality and injustice, and education. It must also address endemic corruption, weak state institutions, stagnant socioeconomic development, and sundry trans-national crimes, which

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provides financial support for the activities of terrorist groups. The need for monitoring and control of small arms and light weapons, including the movement of illegal/economic migrants susceptible to crime within West African Sub-region.

RECOMMENDATIONS

The study recommends needs to accelerate human capital development, social protection, job creation policies and effective response to humanitarian crises. The paper also recommends the need for modern equipment, there must be actionable intelligence, and sources of weapons and funding must be found and blocked. The task of effectively restoring internal stability largely depends on military's response, hence there is a need for recruitment of more military, training and retraining and non-military measures in line with the National Security Strategy, 2019. The paper also recommends that the military and communities should work together to institute effective community policing, early warning and intelligence gathering that reduces the frequency of attacks by armed bandits. The military must change their current reactive methods battling armed banditry to a proactive one by incorporating Stealth, Surprise, and Speed (SSS) to all of their engagements.

REFERENCES

- 1. Amuta, C. (2023). "The Menace of Terrorism & Universal Insecurity" <u>www.thisdaylive.com</u> January 15, 2023.
- 2. Biddle, S. (2001). "Rebuilding the Foundations of Offense- Defense Theory" The journal of Politics 63, No. 3: 714-74
- 3. Coser, L. (1956). *The Functions of Social Conflict:* An examination of the concept of social Conflict and its use in empirical sociological research
- 4. Cornish, D. & Clark, R. (1998). *Opportunities, Precipitates and Criminal Decisions:* Theory for Practice in Situational Crime Prevention, crime prevention studies, Vol. 16, Criminal Justice Press, Monsey, 111-12
- 5. Durkheim, E. (1895). The Rules of Sociological Method: University of Chicago Press
- 6. Egwu, S. (2016). The Political Economy of Rural Banditry in Contemporary Nigeria: *Rural Banditry and Conflict in Northern Nigeria:* Abuja Centre for Democracy & Dev.
- 7. Elaigwu, V. (2003). The Military and the Management of Civil Crises in Nigeria: 1960 1993 Kaduna: Nigeria Defence Academy Press.
- 8. Iraboh, L. (2022). Nigeria Security Problems: Requires Political Solutions, Lecture delivered at Jaji (July 29, 2022)
- 9. Iraboh, L. (2022). "National Security and Development: Strategic Options for Nigeria" Lecture Delivered at the National Defence College Abuja (August 3, 2022)
- 10. Marx, K. (1847). The Poverty of Philosophy: A reply to LA Philosophie De La Misere of M. Proudhon. Chicago Charles H. Kerr & Company
- 11. Mead, G.H. (1863). Mind, Self & Society: The Definitive Edition University of Chicago press USA
- 12. Musa, C. (2023). Countering Violent Extremist Organizations: Using best practices in Nigeria & West Africa, Paper Presentation at Africa Land Forces Summit (May 8-12 2023)
- Musa, C. (2023). "Nigeria Army Participation in ECOMOG Operations and Lesson Learn: 1990-2003". At book/lecture Presentation (July 5, 2023) at International Conference University of Ibadan, Oyo state.
- 14. Ministry of Defence Information Unit (2022). History of Nigerian Army: https://www.army.mil.ng
- 15. Parsons, T. (1970). *Social Structure and Personality:* A free press paperback the Macmillan company 866 Third Avenue, New York
- 16. Yahaya, F. (2022). Deployment of Several Platforms in the Theatre of war: A paper Presentation at First Quarter COAS Conference organized by Army 2022.

CITE AS: Onoja Anthony, Odumu Abraham Sunday and Ejeh Adoyi William (2024). An Assessment of the Nigerian Military Performance in Combating Armed Banditry: A Sociological Review of the Scenario in Birnin Gwari Local Government of Kaduna State (2015-2023). NEWPORT INTERNATIONAL JOURNAL OF CURRENT ISSUES IN ARTS AND MANAGEMENT, 4(2):114-119. https://doi.org/10.59298/NIJCIAM/2024/4.2.7114119