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Conflict Exposure and Disrupted Access to Healthcare and Basic Social Services: Community Evidence from Gwoza, Konduga and Magumeri, Borno State, Nigeria

Maina, S. M., Sabo, A. M., Yahaya, H. & Gwarzo, A. A.[1]

Corresponding Email: shettimam864@gmail.com

[1,2,3,4]Department of Public Health, Maryam Abacha American University of Niger, Maradi, Niger Republic

Abstract

Armed conflict damages health systems, but it also erodes the wider set of services that keep communities healthy, such as food, water, housing and schooling. This article reports community-level evidence on how the Boko Haram insurgency has affected access to healthcare and basic social services in three local government areas of Borno State, north-eastern Nigeria. A convergent mixed-methods design was used. A structured questionnaire was completed by 400 adults in Gwoza, Konduga and Magumeri (response rate 100%; Cronbach's alpha = 0.904 for the five service-access items), and the survey was complemented by key informant interviews and document review. Survey data were summarised using frequencies and percentages, and interview material was analysed thematically. Insurgent groups were named as actors in the conflict by 85.75% of respondents, and loss of life (40.50%), economic hardship (25.50%) and displacement (23.00%) were the impacts most often judged most significant. Education (70.50%), food supply (70.00%), healthcare (68.00%) and housing (68.00%) were each rated as highly or severely affected by roughly two-thirds or more of respondents. Almost all respondents (98.25%) reported that they or a household member had been displaced, and 44.02% of those displaced had not been resettled. Close to half (45.25%) reported a high psychological toll. The findings suggest that harm to health in conflict cannot be separated from harm to the wider provisioning system around it, and that recovery planning should address the two together.

Keywords: armed conflict; healthcare access; social provisioning; displacement; Boko Haram; Borno State; Nigeria

Introduction

Wars rarely end a community's health problems when the shooting stops; more often they create them. Beyond the injuries and deaths, they cause directly, armed conflicts empty clinics of staff, interrupt the flow of medicines and make the journey to a health facility dangerous (Rubenstein & Bittle, 2010). The wider fabric that keeps people well, including food, clean water, shelter and schooling, tends to fray at the same time. The experience of Syria, where health workers and facilities were themselves drawn into the fighting, shows how quickly the two can fail together (Fouad *et al.,* 2017).

North-eastern Nigeria offers a stark example. Since 2009 the Boko Haram insurgency has displaced large numbers of people in Borno State and spilled across the borders into Cameroon, Chad and Niger, turning a domestic security problem into a regional humanitarian one (United Nations Human Rights Council [UNHRC], 2015). The damage to health infrastructure has been considerable. A 2016 facility assessment, as summarised by Tyndall et al. (2020), found that 35%

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of the 743 facilities assessed in Borno had been completely destroyed and a further 29% partially damaged.

Much of what we know about this damage comes from facility audits, humanitarian reports, or studies built around a single service or population group. Fewer studies ask residents how conflict has changed their access to several services at once, and fewer still set those views beside the accounts of officials responsible for recovery. This matter because health does not depend on clinics alone. A household without food, water or a roof is unlikely to stay well however close the nearest facility may be (Kruk *et al.,* 2010). Treating health and social provisioning as one problem is therefore a practical necessity as much as a conceptual choice.

This article draws on a larger findings to address that gap. It asks (a) what kind of conflict residents of Gwoza, Konduga and Magumeri Local Government Areas (LGAs) have lived through; (b) how they rate its effect on access to healthcare, education, food, water and sanitation, and housing; and (c) how far displacement and household hardship have followed from it. The restoration programmes themselves, and the barriers they face, are the subject of a companion paper.

Three ideas shaped the study. The first is the social provisioning approach, which treats the economy as a process embedded in institutions and social relationships, through which societies organise the goods and services people need (Jo, 2011). On this view, access to a clinic or a water point depends on a web of actors (the state, households, markets, NGOs, communities), and conflict matters because it tears at that web. The second is Human Needs Theory, which holds that needs such as security, identity and recognition cannot simply be bargained away, and that their persistent denial feeds grievance (Burton, 1990). The third is the distinction that Collier and Hoeffler (2004) draw between economic opportunity and grievance as drivers of civil conflict. Together these ideas led us to treat education, healthcare, food, water and sanitation, and housing as practical indicators of how well provisioning has held up, and to read displacement and household hardship as signs of unmet need.

Methodology

2.1 Design

The study took a pragmatist stance, choosing methods according to what the research questions required rather than committing to a single tradition. A convergent mixed-methods design was adopted, pairing a cross-sectional household and stakeholder survey with key informant interviews and document review, with the strands brought together at the interpretation stage (Creswell & Creswell, 2018).

2.2 Study area

Borno State has 27 LGAs and has been the main theatre of the insurgency since 2009. Three LGAs, Gwoza, Konduga and Magumeri, were purposively chosen because they had experienced the insurgency, had seen services disrupted and later partly restored, and were accessible enough for fieldwork to be carried out safely.

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2.3 Participants and sampling

The survey sample was calculated with the Taro Yamane formula at a 95% confidence level and a 5% margin of error, using the 2006 census population of Borno State (4,171,104). The result, 399.96, was rounded to 400. Questionnaires were allocated almost equally across the LGAs (Konduga 134; Gwoza 133; Magumeri 133), and eligible adults aged 18 years and above were then selected by simple random sampling within the chosen communities. Key informants were selected purposively for their role and knowledge of conflict management and restoration. They included officials of state ministries and agencies, health personnel, security personnel, community leaders and representatives of organisations working in the area.

2.4 Instruments and data quality

Three instruments were used: a structured, mostly closed-ended questionnaire, an interview guide with open-ended questions, and a document-review guide for policies, programme reports and institutional records. Experts in research methods and in the subject area reviewed the questionnaire and interview guide for face and content validity, and the instruments were pretested with people who resembled the study population but did not take part in the main study. Internal consistency was checked on five Likert-type items measuring the effect of conflict on access to education, healthcare, water and sanitation, food supply and housing. The coefficient was 0.904, well above the conventional 0.70 threshold.

2.5 Ethical considerations

Participation was voluntary and informed consent was obtained before data collection. Respondents were told that they could decline or withdraw without penalty, and they were not required to disclose anything that could cause distress or expose them to risk. Identifying information was left out of the analysis, and permission was obtained from the relevant authorities and community representatives.

2.6 Data analysis

Questionnaire responses were coded and summarised using frequencies and percentages, which suited a study aimed at describing patterns and perceptions rather than testing causal relationships. For multiple-response items, the base used for each percentage is stated in the text. Interview material was coded thematically, and documents were examined by content analysis and used to corroborate or clarify the survey findings.

Results

3.1 Profile of respondents

All 400 questionnaires were completed and usable, a response rate of 100%. Table 1 summarises who responded. Men made up 63.50% of the sample, and the largest age band was 31 to 45 years (39.00%). Most respondents were married (70.00%), and just over half (55.00%) had tertiary education. Nearly two-thirds (62.75%) had lived in their community for more than ten years, so most were describing places they knew well. By occupation, 38.00% (n = 152) were ordinary community members; the others were civil servants (19.75%), government officials (12.00%), healthcare workers (11.50%), NGO workers (10.00%), security personnel (7.00%) and

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people in other occupations (1.75%). The sample therefore blends household and institutional viewpoints. That is useful for triangulation, but it also means the percentages below are not a pure measure of community opinion.

3.2 The nature of the conflict

Respondents described a conflict with many faces. The single most common description, given by 26.50% (n = 106), combined violent attacks, kidnapping, destruction of property and displacement. A further 19.25% (n = 77) described violent attacks alone, and 12.50% (n = 50) described attacks together with property destruction and displacement. Insurgent groups were named by 56.50% (n = 226) as the only actor involved, and by 85.75% (n = 343) once every response combination containing them is counted. When asked for the single most significant impact, 40.50% chose loss of life, 25.50% economic hardship and 23.00% displacement, while disruption of social services and psychological trauma were each chosen by 5.50% (Table 2). Insecurity was not just a matter of the past. Almost a third (31.25%) reported conflict-related incidents daily and 17.75% weekly, although the largest group (41.25%) said incidents now occurred rarely.

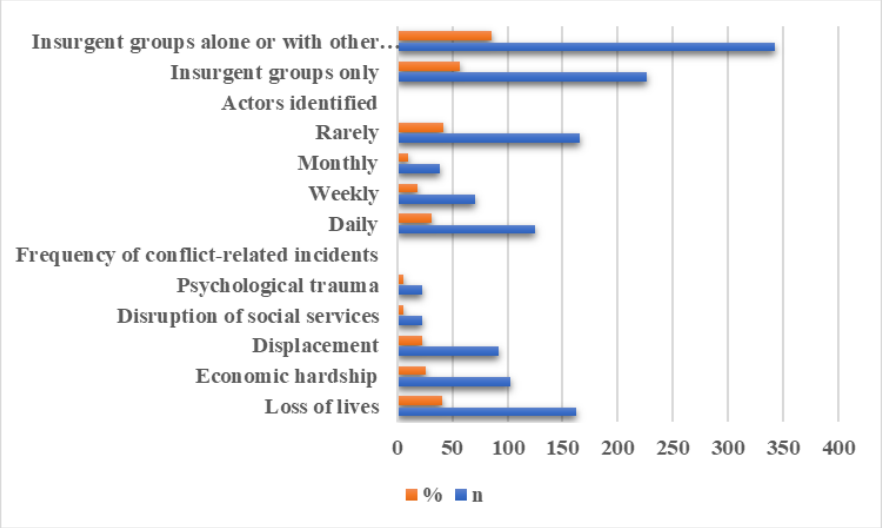


Figure 1. *Profile of the conflict as reported by respondents*
Source: author's data analysis, 2026

Two key informants offered their own explanations of how the insurgency took root. The chairman of the Borno State Local Government Service Commission pointed to widespread poverty and youth joblessness, which in his view made idle young men easy to recruit. A senior official in the State Ministry of Women Affairs and Social Development reported that former fighters who had surrendered told officials that some foreign groups had supplied funds and combat training. These are informants' accounts, and the survey was not designed to verify them.

3.3 Effects on healthcare and basic social services

Respondents rated the effect of the conflict on five services and on their psychological well-being (Table 3). Education was judged highly or severely affected by 70.50% (n = 282), food supply by 70.00% (n = 280), and both healthcare and housing by 68.00% (n = 272). Water and

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sanitation followed a different pattern: only 54.00% rated it highly or severely affected, although adding the 28.00% who chose "moderately" brings the share reporting at least moderate disruption to 82.00%. Very few respondents reported no effect on any service, ranging from 1.75% (education) to 5.50% (water and sanitation). Psychological well-being was the one domain where a sizeable group reported no effect (15.25%, n = 61), yet 45.25% (n = 181) said they were highly affected and a further 9.50% (n = 38) severely affected.

Table 1. Perceived effect of the conflict on access to services and on psychological well-being

Domain	Not at all	Slightly	Moderately	Highly	Severely	Highly + severely (%)
Education	7 (1.75)	45 (11.25)	66 (16.50)	153 (38.25)	129 (32.25)	70.50
Food supply	14 (3.50)	33 (8.25)	73 (18.25)	149 (37.25)	131 (32.75)	70.00
Healthcare	8 (2.00)	44 (11.00)	76 (19.00)	149 (37.25)	123 (30.75)	68.00
Housing	9 (2.25)	45 (11.25)	74 (18.50)	146 (36.50)	126 (31.50)	68.00
Water and sanitation	22 (5.50)	50 (12.50)	112 (28.00)	109 (27.25)	107 (26.75)	54.00
Psychological well-being	61 (15.25)	60 (15.00)	60 (15.00)	181 (45.25)	38 (9.50)	54.75

Source: author's data analysis, 2026

3.4 Household hardship and displacement

Household economies were also under strain. The most frequently selected pattern (31.00%, n = 124) combined loss of income, rising poverty, loss of property and higher living costs. Another 12.75% cited increased poverty alone, 10.75% poverty together with the cost of living, and 9.00% the cost of living alone; the remainder chose other combinations. Displacement was close to universal. Of the 400 respondents, 393 (98.25%) said they or a household member had been displaced. Among those 393, 220 (55.98%) reported having been resettled and 173 (44.02%) reported that they had not (Table 4). A senior official of the State Ministry of Reconstruction, Rehabilitation and Resettlement told the study that about 12,000 houses were built between 2019 and 2023 under the Borno State Resettlement Strategy. Even so, a substantial share of displaced respondents was still unsettled.

Table 2. Displacement and resettlement among respondents

Indicator	n	%	Base
Respondent or household member displaced	393	98.25	All respondents
Not displaced	7	1.75	All respondents
Resettled	220	55.98	Displaced respondents
Not resettled	173	44.02	Displaced respondents

Source: author's data analysis, 2026

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Discussion

4.1 A conflict that reaches well beyond the battlefield

Taken together, the results describe a conflict that is layered, still active in parts of the study area, and linked to harm far beyond the battlefield. The prominence of insurgent groups in respondents' accounts is unsurprising. The ordering of consequences is more telling: loss of life came first, followed closely by economic hardship and displacement. That ordering echoes earlier Nigerian work linking the insurgency to insecurity, economic disruption and damaged infrastructure (Gamawa, 2017), and findings from Michika in Adamawa State, where livelihoods and services were disrupted alongside physical destruction (Rimdans, 2019). The emphasis our informants placed on poverty and joblessness resonates with the distinction Collier and Hoeffler (2004) draw between opportunity and grievance, although our data cannot show which of the two mattered more in Borno. What the data do show is that hardship appears both in how people explain the conflict and in how they experience its aftermath.

4.2 Services failing together

Education was rated worst. That squares with accounts of schools being deliberately attacked during the insurgency (Comolli, 2015), though respondents were rating access rather than damage, so the match is suggestive rather than conclusive. The healthcare result (68.00% highly or severely affected) is consistent with the facility destruction documented by Tyndall et al. (2020), and with evidence from neighbouring Yobe State that displacement, transport restrictions and the departure of health workers weakened services during the insurgency (Ager *et al.,* 2015). Iraq offers a parallel: damaged facilities, displaced staff and medicine shortages disrupted care there, and preventive maternal and child health services stopped in many areas (Ibrahim *et al.,* 2021).
What stands out is how closely four of the five service ratings sit together, between 68.00% and 70.50%. Had the disruption stemmed from something peculiar to the health sector, healthcare might have diverged from the rest. The similarity instead hints at shared causes, probably displacement, insecurity and damaged infrastructure, acting on every service at once. This fits the provisioning view that services rest on a web of institutions rather than on separate pipelines (Jo, 2011), but the survey did not test it directly. The lower figure for water and sanitation might reflect communities turning to informal sources when formal supply failed, although this is conjecture on our part and was not explored in the questionnaire.

4.3 Psychological strain and the unfinished task of resettlement

Self-rated psychological effects were substantial, with 54.75% reporting high or severe effects, though 15.25% reported none. These were single-item self-ratings and not clinical screening, so they are better read as a signal of need than as a prevalence estimate. Even so, they strengthen the argument for placing psychosocial support inside primary care and recovery programmes rather than treating it as an optional extra. The displacement figures deserve the closest attention. That 98.25% of respondents had been displaced, and that more than four in ten of them had not been resettled, shows that large-scale housing construction has not yet closed the gap. Burton (1990) argues that unmet needs for security and belonging do not fade quietly but persist and can feed further grievance. Kruk et al. (2010) make a related point about service

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restoration, suggesting that rebuilding contributes to public trust only when provision is reliable and fair. For a displaced household, a house without working clinics, schools, water points and livelihoods is unlikely to feel like resettlement.

4.4 Implications

Three implications follow. First, recovery planning should assess health, food, water, housing and education together, because residents experience them as a single problem. Second, resettlement programmes should be judged by whether returnees can actually use services, not only by the number of housing units delivered. Third, mental health and psychosocial support deserve explicit budget lines in community recovery plans.

4.5 Limitations

Several limitations should be kept in mind. Only three of Borno's 27 LGAs were studied, chosen partly for accessibility, so generalisation to the whole state should be cautious. The data are self-reported perceptions and may be affected by recall or by reluctance to discuss sensitive matters, although triangulation with interviews and documents helped to offset this. The survey was cross-sectional and descriptive, so it cannot show change over time or test causal links, and results were not broken down by LGA or by respondent type. Because the sample mixed ordinary residents with officials and service providers, the figures reflect a blend of lay and institutional opinion. Future work should use longitudinal designs, compare LGAs and respondent groups, and examine specific vulnerable groups such as women, children, older people and returnees.

Conclusion

Residents of Gwoza, Konduga and Magumeri describe a conflict that has taken lives, livelihoods and homes, and that has weakened access to healthcare, education, food, water and housing together. Displacement was almost universal, and a large share of displaced respondents had yet to be resettled. These findings suggest that the health consequences of conflict cannot be repaired through the health sector alone. Recovery in Borno State will depend on treating healthcare as one component of a wider provisioning system, and on measuring success by whether people can actually reach and use the services that have been rebuilt.

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Volume 3, Number 1, October, 2026
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