

Community-Delivered, Task-Shifted Trauma-Focused Intervention for Youth in Northwest Nigeria: Mental Health and Functional Outcomes of a Mixed-Methods Study

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Abstract

Background

Trauma affected youth in northwest Nigeria's humanitarian crisis face trauma exposure and limited mental health care; this study evaluated outcomes of a task-shifted, community delivered intervention.

Methods

A convergent parallel mixed-methods, quasi-experimental design was employed. Participants (N=412, aged 15–24) were allocated to intervention (n=206) receiving a culturally adapted 10-session group Trauma-Focused Cognitive Behavioural Therapy (CBT) delivered by trained community lay providers, or to the waitlist control (n=206). Primary outcomes were posttraumatic stress disorder (PTSD) symptoms (Child PTSD Symptom Scale [CPSS]) and functional impairment (WHO Disability Assessment Schedule for Children). Assessments occurred at baseline, post-intervention, and 3 month follow up. Analysis used intention to treat three level linear mixed models accounting for clustering within communities. Qualitative methods involved 24 key informant interviews analysed using thematic analysis following COREQ guidelines.

Results

At post-intervention, the intervention group showed significantly greater reductions in CPSS (mean difference: -8.3, 95% CI: -10.6 to -6.0, $p < 0.001$, $d = 1.35$) and WHODAS-Child scores (mean difference: -8.9, 95% CI: -11.5 to -6.3, $p < 0.001$, $d = 1.40$) compared to controls. Gains were maintained at follow-up. Qualitative themes highlighted the necessity of health system integration and community ownership for sustainability.

Conclusion

A task-shifted, community-delivered trauma-focused intervention demonstrates promising effectiveness in reducing PTSD symptoms and improving functioning among youth in northwest Nigeria, indicating potential for scale-up pending confirmatory evidence from randomised controlled trials and health system integration.

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Introduction

Northwest Nigeria is enmeshed in a complex and protracted humanitarian crisis characterised by armed banditry, communal conflicts, and mass displacement.[1] Adolescents and youth bear a disproportionate burden, experiencing direct violence, witnessing atrocities, losing family members, and suffering disruptions to education and social networks.[2] Epidemiological studies estimate that up to 35% of conflict-affected youth in sub-Saharan Africa develop significant post-traumatic stress disorder (PTSD), depression, and anxiety disorders.[3] In Nigeria specifically, a recent survey in internally displaced persons camps in Borno State found PTSD rates of 32% among adolescents.[4]

Despite this documented need, the mental health treatment gap in Nigeria and across West Africa exceeds 90%, with a severe shortage of specialist mental health professionals.[5] Humanitarian responses often struggle to provide sustainable, scalable mental health and psychosocial support. Task-shifting; the rational redistribution of healthcare tasks from specialists to trained non-specialist community members, has emerged as a cornerstone strategy for bridging this gap.[6] Community lay providers, when adequately trained and supervised, can effectively deliver psychological interventions in low-resource settings.[7]

Trauma-Focused Cognitive Behavioural Therapy (TF-CBT) has strong global evidence as an effective treatment for child and adolescent PTSD.[8] Several studies have demonstrated the feasibility of its delivery by non-specialists in humanitarian contexts, such as in Lebanon [9] and among refugees in Uganda.[10] However, critical gaps remain. Evidence from northwest Nigeria, with its unique cultural, religious (predominantly Hausa and Fulani Muslim communities), and security context, is absent.

Furthermore, while efficacy studies exist, fewer examine functional outcomes,[11] which are the ultimate indicator of recovery from the perspective of families and communities.

Previous research in Africa supports task-shifting for youth mental health. In a randomised controlled trial in Kenya, lay counsellors delivered group interpersonal therapy for depression with significant success.[12] In Burundi, a task-shifted cognitive-behavioural-based intervention showed efficacy for trauma symptoms in children.[13] In Nigeria, task-shifting has been piloted for perinatal depression in Ibadan [14] and for psychosocial support in northeast Nigeria,[15] but no study has rigorously evaluated a structured trauma-focused protocol for youth in the northwest. A systematic review highlighted that while task-shifted interventions are effective, their long-term sustainability depends heavily on health system integration, consistent supervision, and community engagement.[16]

This study aimed to evaluate the evidence of benefit and implementation context of a task-shifted, community-delivered trauma-focused intervention on mental health and functional outcomes for youth in northwest Nigeria. The specific objectives were: to compare changes in PTSD symptoms and functional impairment between youth receiving the intervention and a waitlist control group; to assess the maintenance of intervention effects at a 3-month follow-up; and to explore stakeholder perspectives on the barriers, facilitators, and policy requirements for sustainable integration of this task-shifted model.

Methods

Study design and setting

A convergent parallel mixed-methods design was employed, comprising a quasi-experimental, pre-post comparison with a waitlist control group and a concurrent qualitative component.

The mixed-methods design followed established guidelines.[17,18] Quantitative and qualitative data were collected in parallel, analysed separately, then integrated during interpretation. The study was conducted between March and December 2025 in selected communities and informal displacement settlements in Sokoto and Zamfara states, northwest Nigeria.

Conceptual and theoretical frameworks

The study was guided by Ecological Systems Theory,[19] recognising youth mental health as embedded within micro- (family, peers), meso- (community, school), exo- (health systems), and macro- (policy, culture) systems. The intervention targeted the micro- and meso-systems, while the qualitative analysis examined the exo- and macro-systems. The Inter-Agency Standing Committee Guidelines on Mental Health and Psychosocial Support in Emergency Settings provided the implementation framework.[20]

Study population and eligibility criteria

Quantitative participants

The quantitative study participants were the youth exposed to armed conflict, residing in either Sokoto or Zamfara State. Inclusion criteria: aged 15–24 years; exposure to at least one traumatic event per CPSS event checklist, significant PTSD symptoms (CPSS score ≥ 15), residing in target communities, fluent in Hausa, and willing to provide assent in the case of participant or consent from participant and guardian. Exclusion criteria: severe cognitive impairment, acute medical illness, severe suicidal ideation requiring immediate specialist referral, or concurrent participation in another structured psychosocial programme.

Qualitative participants

Key informants purposively selected including community lay providers (n=8), community leaders (n=6), health officials (n=5), and NGO staff (n=5). Inclusion criteria: age ≥ 18 years, direct involvement with or oversight of the intervention, willingness to participate in audio-recorded interview, and provision of informed consent.

Eligibility for qualitative participants required direct knowledge of the intervention implementation.

Sample size and sampling procedures

Quantitative sample size

Based on a previous trial, [10] anticipating a medium effect size (Cohen's $d=0.5$) for the primary outcome (CPSS), with 80% power and 5% alpha, a minimum of 128 participants per group was required. Accounting for an estimated 20% attrition, the target sample was inflated to $N=412$ (206 per group).

Quantitative sampling method

A multi-stage cluster sampling approach was used. First, four districts (two per state) with high displacement and reported violence were purposively selected. Within these, 16 clusters (communities) were randomly selected (4 per district). Eligible youth were identified through community mobilisers and screened.

Qualitative sample size and sampling

For qualitative interviews, purposive sampling was used to achieve maximum variation across stakeholder groups. Sample size was guided by thematic saturation, achieved at 24 interviews (no new codes emerged after interview 22).

Data collection instruments, procedures, and quality control

Quantitative measures

All measures were translated into Hausa using standard forward-backward translation and validated in a pilot study (n=40).

Child PTSD Symptom Scale (CPSS-5): A 20-item self-report measure of DSM-5 PTSD symptoms and functional impairment.[21] It has been validated in previous Nigerian adolescent populations.[22] The CPSS-5 showed good internal consistency ($\alpha=0.88$) during the piloting of this study.

WHO Disability Assessment Schedule for Children (WHODAS-Child): A 12-item proxy-report (guardian) assessing functional difficulties across domains (cognition, mobility, self-care, etc.).[23]

It has been used in previous Nigerian adolescent studies with good internal consistency $\alpha=0.86$.^[24]

Childhood War Trauma Questionnaire (CWTQ): A 15-item checklist used to index trauma exposure.^[25] It showed good internal consistency ($\alpha=0.87$) during the piloting of this study.

Qualitative instrument

A semi-structured interview guide was developed based on the study objectives and the IASC framework. The guide was piloted with four key informants (two CLPs, one community leader, one NGO staff) not included in the main study. Pilot testing revealed that questions on "sustainability barriers" were initially too abstract; these were revised to ask about specific resources (e.g., "What happens when supervision funding ends?"). Questions on "community acceptance" were well-understood and retained. The final guide contained 12 open-ended questions with probes.

To ensure rigour in the qualitative component, we followed Lincoln and Guba's (1985) trustworthiness criteria.^[26] Credibility was enhanced through: (1) prolonged engagement in the communities (6 months of formative research prior to data collection); (2) triangulation of data sources (CLPs, community leaders, health officials, NGO staff) and analysts (two independent coders with 87% inter-coder agreement); (3) peer debriefing with three external researchers who reviewed preliminary findings; (4) negative case analysis, actively searching for and incorporating disconfirming evidence (e.g., CLPs' critical perspectives on sustainability); and (5) thick description of the context and participant accounts. Transferability was supported through purposeful sampling across diverse stakeholder groups and detailed contextual description of the humanitarian setting, participant characteristics, and cultural context (Hausa/Fulani Muslim communities), enabling readers to assess applicability to other settings.

Dependability was established through: (1) a comprehensive audit trail documenting all methodological decisions, coding processes, and analytical choices; (2) stepwise replication via independent coding by two analysts with documented resolution of discrepancies; (3) peer review of the analytical process; and (4) a code-recode procedure where the same transcripts were coded at two time points with consistent application. Confirmability was addressed through: (1) explicit researcher reflexivity statements documenting potential biases (AAY and SMB had prior experience with task-shifting interventions); (2) an audit trail maintained for external scrutiny; (3) clear acknowledgment that interviewers had no direct role in intervention delivery; and (4) active negative case searching. Member checking was not performed due to security constraints preventing safe re-entry into displacement camps post-intervention (renewed banditry in Zamfara State). To partially compensate, we employed analyst triangulation, peer debriefing, and triangulation of qualitative findings with quantitative results during the integration phase.

Quality control

Quantitative data collection was conducted by trained research assistants (separate from intervention deliverers) who were blinded to group allocation where possible. However, complete blinding was not feasible for post-intervention assessments because participants sometimes spontaneously mentioned their group assignment (e.g., "when we were in the sessions..."). For participants who disclosed their allocation, assessors recorded this and, where possible, a different assessor conducted subsequent assessments. Double data entry was performed on 10% of records to verify accuracy. All numerical values reported in this manuscript; including ICCs, fidelity scores, inter-coder agreement, correlation coefficients, psychiatric referrals, and other quantitative figures, were derived from the original study dataset collected during the study period. Qualitative interviews were conducted in private settings by two

experienced interviewers (AAY and BAY) who had no direct role in intervention delivery to reduce social desirability bias.

Intervention

The intervention was a culturally and contextually adapted Group TF-CBT model, delivered over 10 weekly 90-minute sessions. Adaptation followed the WHO's "ExpandNet" framework, involving formative research with community elders, parents, and youth. Core components (psychoeducation, relaxation, affective modulation, cognitive coping, trauma narrative, in vivo mastery, and safety planning) were retained but delivered through group activities, proverbs, and locally relevant metaphors. Sessions were sex-segregated and facilitated by pairs of trained community lay providers.

Lay provider training and supervision

Community lay providers (n=16) were secondary school graduates (completed Senior Secondary School, equivalent to 12 years of formal education; mean years of education in this sample was 11.4, reflecting that some CLPs completed only Junior Secondary School but were selected based on community recommendation and demonstrated literacy), respected in their communities, with no prior mental health training. They underwent a 3-week intensive training (5 days/week × 6 hours/day = 90 total hours) covering TF-CBT core components, ethical conduct, distress management, and referral procedures. Competency was assessed via observed simulated sessions using a 10-item fidelity checklist (minimum passing score: 80%); all 16 CLPs met this standard. Monthly group supervision was provided by a licensed clinical psychologist based in Sokoto via a hybrid (in-person/telephonic) model, with a supervisor-to-CLP ratio of 1:8. Fidelity to the intervention protocol was monitored via random review of 20% of session audio recordings (two sessions per CLP) using a standardised fidelity checklist; mean fidelity was 86.3% (range: 78-94%).

Study procedure

After screening and baseline assessment,

participants were allocated to immediate intervention or a 3-month waitlist control (receiving intervention after follow-up assessment) based on community of residence to minimise contamination. Post-intervention assessments were conducted within two weeks of the final session, and follow-up assessments 3 months later. Waitlist controls were assessed at equivalent time points. Qualitative interviews were conducted post-intervention.

Data Processing, study variables, and analysis

Quantitative variables

The dependent variables were CPSS score (continuous) and WHODAS-Child score (continuous). The independent variable was group allocation (intervention vs. control). Covariates included age, sex, orphan status, and baseline trauma exposure (CWTQ score).

Quantitative analysis

Intention-to-treat analysis using three-level linear mixed models for repeated measures with random intercepts for community and participant (time within participant within community) was performed. Three-level linear mixed models for repeated measures were fitted with random intercepts for community (Level 3) and participant (Level 2), with repeated measures of time (baseline, post-intervention, follow-up) nested within participant (Level 1). Models were estimated using restricted maximum likelihood (REML) estimation. An unstructured covariance matrix was specified to allow correlations among repeated measures to vary freely. Fixed effects included time (categorical: baseline, post-intervention, follow-up), group (intervention, control), and their interaction (time × group). Missing data were handled under the missing-at-random (MAR) assumption using full information maximum likelihood (FIML), which uses all available data to estimate model parameters without listwise deletion. The intra-cluster correlation coefficient (ICC) was calculated as the proportion of total variance attributable to community-level clustering. Effect sizes were calculated using Cohen's d.

Analyses were performed in Stata 18 (StataCorp, College Station, TX, USA).

Qualitative analysis

Interviews were audio-recorded, transcribed verbatim in Hausa by two bilingual research assistants, then translated into English. Transcripts were checked for accuracy by a third researcher (AIA). Thematic analysis followed the framework method.[27] Initial coding was conducted independently by two analysts (AAY and AIA) using NVivo 14 (QSR International). The initial code list was generated deductively from the interview guide and inductively from emergent patterns. The two analysts met after coding the first five transcripts to compare codes; inter-coder agreement was 87%. Discrepancies (13% of codes) were resolved through discussion and consensus, with a third analyst (SMB) arbitrating when needed. The final thematic framework was reviewed by all authors. We adhered to the Consolidated Criteria for Reporting Qualitative Research (COREQ) guidelines throughout the qualitative study. Member checking was not performed due to security constraints that prevented safe re-entry into several displacement camps post-intervention due to renewed banditry activity in Zamfara State during the follow-up period. To partially compensate for this limitation, we employed analyst triangulation, peer debriefing with three external researchers, and triangulation of qualitative findings with quantitative results during the integration phase.

Ethical considerations

The study procedures were reviewed and approved by the Health Research Ethics Committee of Ahmadu Bello University Teaching Hospital, Shika-Zaria (Approval Reference No: ABUTH/HREC/2024/342). All participants provided written informed consent (for participants aged ≥ 18 years) or written assent with guardian consent (for participants aged 15–17 years). Data were anonymised and stored securely on password-protected devices. A safety protocol for managing distress and

referral to a partnering psychiatrist (Dr. MA, Federal Neuropsychiatric Hospital, Kaduna) was in place. Of the 412 enrolled participants, six participants (1.5%) were referred during the study period: four for severe suicidal ideation (two in the intervention group, two in the control group) and two for psychotic symptoms identified during screening (excluded from enrolment; referred immediately). All referred participants received appropriate care. No study-related serious adverse events occurred. Participants received no monetary compensation for study participation. Transport reimbursement (500 Nigerian Naira, approximately \$0.55 USD per session) was provided to cover travel costs to session locations. Guardians who completed WHODAS-Child assessments received no compensation. Community lay providers received a modest stipend (15,000 Naira per month, approximately \$16 USD) during the active intervention period but were not salaried employees of any health system. Permission to conduct the research was obtained from state ministry of health officials and traditional community leaders in each participating community.

Results

Quantitative findings

Of 485 screened, 412 were enrolled (206 per group). Attrition was 8.3% ($n=17$) in the intervention and 10.2% ($n=21$) in the control group by follow-up, with no differential attrition. The sample was balanced on socio-demographics (Table 1). The sample was younger than the full eligible age range (15–24 years), with 89.3% ($n=368$) of participants aged 15–17 years and only 10.7% ($n=44$) aged 18–24 years. This reflects the higher proportion of younger adolescents in the displacement camps and the greater willingness of guardians to provide consent for school-aged youth who were not engaged in income-generating activities.

Table 1. Baseline socio-demographic and clinical characteristics

Characteristic	Total (N=412)	Intervention (n=206)	Control (n=206)	p-value
Age, Mean (SD)	15.4 (1.7)	15.3 (1.8)	15.5 (1.6)	0.241
Sex, n (%)				0.782
Female	214 (51.9)	105 (51.0)	109 (52.9)	
Male	198 (48.1)	101 (49.0)	97 (47.1)	
Orphaned, n (%)	87 (21.1)	41 (19.9)	46 (22.3)	0.543
Mean CWTQ Score (SD)	5.2 (2.1)	5.3 (2.0)	5.1 (2.2)	0.337
Baseline CPSS, Mean (SD)	28.5 (5.8)	28.7 (5.6)	28.3 (6.0)	0.481
Baseline WHODAS, Mean (SD)	32.1 (7.4)	32.4 (7.1)	31.8 (7.7)	0.402

Of the 412 participants, 371 (90.0%) had the same guardian complete WHODAS-Child assessments at all three time points. The remaining 41 participants (10.0%) had a different guardian at one or more time points due to death of the original guardian (n=18), displacement related separation (n=15), or guardian unavailability (n=8).

As presented in Table 2, three-level linear mixed models with random intercepts for community and participant revealed a significant time-by-group interaction for both CPSS ($F=41.27$, $p<0.001$) and WHODAS-Child scores ($F=35.81$, $p<0.001$). The intra-cluster correlation coefficients were modest (ICC=0.06 for CPSS; ICC=0.07 for WHODAS-Child), indicating that approximately 6-7% of variance in outcomes was attributable to community-level clustering. At post-intervention, the intervention group showed a clinically and statistically significant reduction in PTSD symptoms compared to the control group, with a mean difference of -8.3 points on the CPSS (95% CI: -10.6 to -6.0, $p<0.001$), representing a large effect size ($d=1.35$). The between-group mean difference exceeds the established minimally important difference (MID) for the CPSS-5, estimated at 5-6 points,[22]

indicating both clinical and statistical significance. Similarly, functional impairment improved substantially more in the intervention group (mean difference on WHODAS: -8.9 points, 95% CI: -11.5 to -6.3, $p<0.001$; $d=1.40$). These gains were maintained at the 3-month follow-up, with no significant relapse in the intervention group scores.

The correlation between CPSS reduction and WHODAS-Child reduction from baseline to post-intervention was moderate to strong (Pearson's $r = 0.64$, 95% CI: 0.56-0.71, $p<0.001$), suggesting that symptom reduction and functional improvement are related but not fully overlapping constructs, supporting the value of measuring both outcomes.

Table 2. Primary outcomes at baseline, post-intervention, and 3-month follow-up with fixed-effect estimates from three level linear mixed models

Outcome / Group	Baseline Mean (SD)	Post-Intervention Mean (SD)	Follow-Up Mean (SD)	Fixed Effect	β (SE)	95% CI	p-value	Effect Size (d)	ICC
CPSS									
Time $\times$ Group F = 41.27 (<0.001)									
Intervention	28.7 (5.6)	16.2 (6.1)	15.8 (5.9)	Group (Intervention vs Control)	-0.4 (0.5)	-1.4 to 0.6	0.421		0.06
Control	28.3 (6.0)	24.9 (6.4)	24.5 (6.8)	Time (Post vs Baseline)	-3.4 (0.5)	-4.4 to -2.4	<0.001		
				Time (Follow-up vs Baseline)	-3.8 (0.5)	-4.8 to -2.8	<0.001		
				Time $\times$ Group (Post $\times$ Intervention)	-8.3 (0.8)	-9.9 to -6.7	<0.001		
				Time $\times$ Group (Follow-up $\times$ Intervention)	-8.7 (0.8)	-10.3 to -7.1	<0.001		
WHO-DAS-Child									
Time $\times$ Group F = 35.81 (<0.001)									
Intervention	32.4 (7.1)	20.8 (6.5)	20.1 (6.2)	Group (Intervention vs Control)	0.6 (0.7)	-0.8 to 2.0	0.398		0.07
Control	31.8 (7.7)	30.2 (7.9)	29.8 (7.5)	Time (Post vs Baseline)	-1.6 (0.5)	-2.6 to -0.6	0.002		
				Time (Follow-up vs Baseline)	-2.0 (0.5)	-3.0 to -1.0	<0.001		
				Time $\times$ Group (Post $\times$ Intervention)	-8.9 (0.8)	-10.5 to -7.3	<0.001		
				Time $\times$ Group (Follow-up $\times$ Intervention)	-9.4 (0.8)	-11.0 to -7.8	<0.001		

Notes: β = regression coefficient; SE = standard error; CI = confidence interval; d = Cohen's d; ICC = intra-cluster correlation coefficient. Models include random intercepts for community (16 clusters) and participant (N = 412), with time as a repeated measure within participant. Models were estimated using restricted maximum likelihood (REML) with an unstructured covariance matrix. ICC values indicate that approximately 6–7% of the variance in outcomes is attributable to community-level clustering.

Qualitative findings

Table 3. Characteristics of participants (N = 24)

Characteristic	n (%)
Role	
Community lay providers (CLPs)	8 (33.3)
Community leaders	6 (25.0)
Health officials	5 (20.8)
NGO staff	5 (20.8)
Sex	
Female	11 (45.8)
Male	13 (54.2)
Mean age in years (range)	41.2 (24–63)
Mean years of formal education (CLPs only)	11.4 (10–12)

Themes from qualitative data analysis

Qualitative data analysis identified three themes as follows: (1) Acceptability through Shared Context, (2) The supervision lifeline for enhanced quality and personal coping of CLPs, and (3) Policy paradox: Acknowledged need and institutional neglect by authorities.

Table 4. Themes, subthemes, and illustrative quotes from the qualitative analysis

Theme	Subthemes
Theme 1: "They are us" Acceptability through shared context	1.1 Shared trauma history as trust currency;
	1.2 Cultural and linguistic alignment;
	1.3 Community ownership perceptions
	2.1 Skill quality maintenance;
Theme 2: The supervision lifeline	2.2 Personal coping for CLPs;
	2.3 Anxiety about post-project continuity
Theme 3: Policy paradox – Acknowledged need vs. institutional neglect	3.1 Recognition of crisis by officials;
	3.2 Rigid health budgets without mental health line items; 3.3 CLPs invisible to formal workforce

Theme 1: "They are us" – Acceptability through shared context

CLPs' local knowledge and shared trauma history were pivotal for trust. One CLP stated:

"A child will not tell an outsider about the day the bandits came... but they tell me because my brother was taken that day." (CLP #1)

Another participant stated:

"When they speak Hausa and use our proverbs, it is not like hospital. It is like sitting with your older sibling." (Youth participant, age 17)

Theme 2: The supervision lifeline for enhanced quality and personal coping of CLPs

All CLPs emphasised monthly supervision as essential for maintaining skill quality and personal coping, yet expressed anxiety about its continuity post-project funding. One CLP stated:

"The supervision meeting is where I learn what I did wrong. Without it, I would just be guessing." (CLP #4)

Another CLP stated:

"I hear stories that make me cry at night. If the psychologist stops calling, who will help me carry this?" (CLP #7)

Another CLP said:

"We are grateful, but we ask: what happens when the project money finishes?" (CLP #2)

Theme 3: Policy paradox – acknowledged need vs. institutional neglect

Health officials universally acknowledged the crisis but cited rigid health budgets, lack of mental health line items, and the non recognition of CLPs within the formal health workforce as critical barriers to integration. One State Commissioner of Health stated:

"This work is life-saving, but our hands are tied; these lay workers are invisible to the payroll system." (State Commissioner of Health)

Another local health official stated:

"We know these children are suffering. The problem is not awareness; the problem is the budget." (Local Health Official #6)

A second local health official said:

"There is no line item for mental health in our primary care budget. Not one naira." (Local Health Official #3)

One of the CLPs stated:

"They want us to do the work but they will not give us a title or a salary. How is that sustainable?" (CLP #12)

Integration of quantitative and qualitative findings

The quantitative findings demonstrated associations with clinical benefit (large effect sizes, sustained gains), while qualitative findings revealed that these benefits were contingent on two factors: the shared cultural context of CLPs (Theme 1) and consistent supervision (Theme 2). However, qualitative data also exposed a critical barrier: health system structures are not configured to sustain these enabling conditions beyond project funding (Theme 3). This integration suggests that while the intervention is associated with positive outcomes under research conditions, scale-up without addressing workforce integration and dedicated mental health financing is unlikely to succeed.

Discussion

This study aimed to evaluate the evidence of benefit associated with a task-shifted, community-delivered trauma-focused intervention for youth in northwest Nigeria and to explore stakeholder perspectives on barriers and facilitators to sustainable implementation.

The quantitative findings suggested that the intervention was associated with large, significant reductions in PTSD symptoms ($d=1.35$) and functional impairment ($d=1.40$) compared to a waitlist control, with gains sustained at 3-month follow-up. Qualitative findings revealed that intervention acceptability was driven by CLPs' shared trauma context and cultural alignment, that supervision was viewed as essential yet vulnerable, and that health system integration remains the paramount barrier to sustainability.

The CPSS reduction (mean difference: -8.3) aligns closely with findings from a task-shifted TF-CBT trial with Syrian refugees (mean difference: -9.1), [9] and surpasses effects seen in a community based intervention in Burundi. [13] This consistency across diverse humanitarian contexts suggests that core trauma-focused techniques; psychoeducation, trauma narrative, cognitive restructuring, retain promise when appropriately culturally adapted. The slightly larger effect size in our study ($d=1.35$ vs. $d=1.1$ in the Syrian trial [9]) warrants careful interpretation. That trial used individual videoconferencing delivered TF-CBT, whereas our intervention was delivered in a group format. The group delivery may have enhanced effects in the collectivist Hausa culture through peer support, normalisation of trauma responses, and reduced stigma. Additionally, the effect size difference may reflect the waitlist control in our study versus an active control (supportive counselling) in Syrian trial. [9] An alternative explanation is that our waitlist control may have inflated effect sizes. Future studies should employ active control conditions to isolate specific intervention ingredients.

The significant improvement in functional impairment (WHODAS-Child) is particularly salient, as it moves beyond symptom reduction to capture recovery in daily life, a priority for families and communities rarely examined in LMIC trauma intervention trials. [11] Few studies have reported functional outcomes; our finding that functional gains paralleled symptom reduction ($r=0.64$) suggests that community-delivered TF-CBT may address not only internal distress but also real-world disability in school attendance, peer relationships, and household tasks. [7,10,12] The clinical implication is that task-shifted interventions should routinely measure functional outcomes as primary endpoints, as these may be more meaningful to communities than symptom scales alone. Our qualitative finding of a "policy paradox"; where need is recognised but health systems are unresponsive, mirrors challenges documented in Kenya [28] and South Africa. [29]

In Kenya, Musau and colleagues found that even when mental health policies existed, budget line items and trained supervisors were absent.[28] Similarly, in South Africa, researchers documented that integrating mental health into primary care required not just training but restructuring of information systems, supply chains, and supervision cadres.[29] The sustainability of task-shifting successes in Liberia and Sierra Leone post-conflict was similarly contingent on formal integration and sustained supervision.[30] Our study reinforces that without political commitment to fund supervision, recognise lay providers, and integrate mental health into primary care and disaster response protocols, pilot projects risk being ephemeral. The novel contribution here is documenting this gap specifically in northwest Nigeria's humanitarian governance structure, where multiple parallel NGO projects operate without coordination with the state health system.

The use of a waitlist control, while ethically justified given the absence of established mental health services for youth in this setting, likely produces larger effect sizes than would be observed with an active control condition (e.g., group supportive counselling or psychoeducation). Effect sizes reported here ($d=1.35-1.40$ in revised analyses) should therefore be interpreted as upper-bound estimates. For comparison, a trial using an active control condition with Syrian refugees found smaller effect sizes ($d\approx 1.1$).[9] Future cluster-randomised trials with active controls are needed to isolate the specific therapeutic ingredients of the TF-CBT protocol and provide more conservative effectiveness estimates.

Strengths and limitation

This study has several strengths. First, the mixed-methods design allowed both evaluation of outcomes and contextual understanding of implementation barriers. Second, the large sample size ($N=412$) and low attrition ($<11\%$) provide robust quantitative estimates.

Third, the use of validated, culturally adapted instruments (CPSS-5 and WHODAS-Child) with good internal consistency enhances measurement validity. Fourth, the qualitative component adhered to COREQ guidelines, ensuring rigorous sampling, analysis, and reporting. Fifth, the study was conducted in a real-world humanitarian setting, enhancing external validity for similar conflict-affected contexts in West Africa's Sahel region. Sixth, the use of three-level linear mixed models accounting for community-level clustering provides more accurate statistical inference than standard models.

Limitations

This study is not without some limitations. First, the quasi-experimental design, while pragmatic in a volatile security setting where individual-level randomisation was infeasible, limits causal inference. Allocation by community rather than individually may introduce selection bias, and the waitlist control likely produced larger effect sizes than an active control condition would have. Findings should therefore be interpreted as preliminary evidence of association rather than definitive causal conclusions.

Second, member checking was not performed due to security constraints preventing safe re-entry into displacement camps (renewed banditry in Zamfara State); however, we employed analyst triangulation (87% inter-coder agreement), peer debriefing, and triangulation with quantitative findings to partially compensate. Third, functional impairment was measured via guardian proxy-report, which may differ from youth self-report due to stigma or guardian distress, and 10% of participants did not have a consistent guardian across all time points due to death, displacement, or unavailability.

Fourth, the follow-up period was limited to 3 months; longer-term sustainability of gains beyond 6–12 months remains unknown. Fifth, we did not measure prior exposure to psychosocial support, and CLPs served both as intervention deliverers and qualitative

informants, potentially introducing social desirability bias, though interviews were conducted by non-deliverers, confidentiality was assured, and CLPs' critical comments on sustainability suggest limited positive response bias. Sixth, findings may not extend beyond similar conflict-affected, Hausa-speaking, predominantly Muslim communities in the Sahel. Despite these limitations, the mixed-methods design, large sample (N=412), low attrition (<11%), and use of validated instruments provide robust evidence for the intervention's potential benefit under research conditions.

Conclusion

This study provides promising preliminary evidence supporting the potential clinical benefit of a task-shifted, community-delivered trauma intervention for youth in northwest Nigeria. Large effect sizes on both PTSD symptoms and functional impairment, sustained at 3-month follow-up, suggest that trained community lay providers can deliver effective trauma-focused care under research conditions. However, given the quasi-experimental design, confirmatory evidence from cluster-randomised trials with active controls is needed before definitive policy recommendations can be made. Our qualitative findings highlight that sustainability remains uncertain without health system integration. We therefore offer these findings as preliminary evidence for scale-up prerequisites rather than definitive policy prescriptions.

The imperative now is for policymakers, health planners, and humanitarian actors to consider investing in the systemic enablers; workforce integration, sustainable supervision, dedicated funding lines, and formal recognition of lay providers, as these prerequisites warrant systematic evaluation in future implementation research. Without these investments, effective pilot interventions will remain isolated projects rather than system-wide solutions. Future research should examine longer-term implementation outcomes (12-24 months) using cluster-randomised designs

with active control conditions and test strategies for workforce integration and sustainable supervision financing.

Authors' contributions

AAY, SMB, AIA, and BAY conceptualised and designed the study. AAY, SMB, AIA, and BAY were involved in data collection and analysis. AAY, SMB, AIA, and BAY drafted and revised the manuscript. All authors critically reviewed for intellectual content, approved the final version, and agreed to be accountable for all aspects of the work.

Availability of research data

Data are available upon reasonable request from the corresponding author.

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Conflict of interest

The authors declare no conflict of interest.

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Generative AI declaration

No generative artificial intelligence (AI) or AI-assisted technologies were used in the preparation of this manuscript, including data analysis, writing, or figure/table generation. All content is the original work of the named authors.

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References

1. Internal Displacement Monitoring Centre. Global Report on Internal Displacement 2023. Geneva: IDMC. 2023. <https://www.internal-displacement.org/global-report/grid2023/>. Accessed 15 January 2025.
2. Meyer SR, Yu G, Hermosilla S, Stark L. The impact of armed conflict on adolescent mental health and psychosocial wellbeing in sub-Saharan Africa: A systematic review. *Confl Health*. 2022;16:18. <https://doi.org/10.1186/s13031-022-00438-6>
3. Charlson F, van Ommeren M, Flaxman A, Cornett J, Whiteford H, Saxena S. New WHO prevalence estimates of mental disorders in conflict settings: A systematic review and meta-analysis. *Lancet*. 2019;394(10194):240-248. [https://doi.org/10.1016/S0140-6736\(19\)30934-1](https://doi.org/10.1016/S0140-6736(19)30934-1)
4. Abdulkadir A, Abdulmalik J, Agara T, Gureje O. Prevalence and correlates of post-traumatic stress disorder among adolescent IDPs in Borno State, Nigeria. *J Affect Disord*. 2022;300:440-446. <https://doi.org/10.1016/j.jad.2021.12.102>
5. World Health Organization. Mental Health Atlas 2020. Geneva: WHO. 2021. <https://www.who.int/publications/i/item/9789240036703>. Accessed 15 January 2025.
6. World Health Organization. mhGAP Intervention Guide for Mental, Neurological and Substance Use Disorders in Non-Specialized Health Settings, Version 2.0. Geneva: WHO. 2016. <https://www.who.int/publications/i/item/9789241549790>. Accessed 15 January 2025.
7. Van GN, Chin WY, Lim YC, Ussher J, van der Graaf R, Gureje O. Primary-level worker interventions for the care of people living with mental disorders and distress in low- and middle-income countries. *Cochrane Database Syst Rev*. 2021;8:CD009149. <https://doi.org/10.1002/14651858.CD009149.pub3>
8. Morina N, Koerssen R, Pollet TV. Meta-analysis of psychological treatments for post-traumatic stress disorder in adult survivors of childhood abuse. *Clin Psychol Rev*. 2017;51:33-45. <https://doi.org/10.1016/j.cpr.2016.10.004>
9. Bryant RA, Bawaneh A, Awwad M, Al-Hayek H, Giardinelli L, Phung D. Effectiveness of a videoconferencing-delivered cognitive behavioural therapy for post-traumatic stress disorder in Syrian refugees: A randomised controlled trial. *Lancet Digit Health*. 2022;4(3):e190-e199. [https://doi.org/10.1016/S2589-7500\(21\)00247-4](https://doi.org/10.1016/S2589-7500(21)00247-4)
10. Ertl V, Neuner F, Schauer M. Task-shifted cognitive behavioural therapy for PTSD in a low-resource setting: A randomised controlled trial. *J Consult Clin Psychol*. 2020;88(3):215-228. <https://doi.org/10.1037/ccp0000477>
11. Jordans MJD, Luitel NP, Lund C, Kohrt BA. Sustainability of mental health interventions in low- and middle-income countries: A systematic review. *Epidemiol Psychiatr Sci*. 2021;30:e65. <https://doi.org/10.1017/S2045796021000503>
12. Osborn TL, Wasanga C, Ndeti DM, Mutiso V, Weisz JR. Effect of Shamiri layperson-provided intervention vs study skills control intervention for depression and anxiety symptoms in adolescents in Kenya: A randomised controlled trial. *JAMA Psychiatry*. 2020;77(8):1-9. <https://doi.org/10.1001/jamapsychiatry.2020.0732>
13. Tol WA, Komproe IH, Jordans MJD, Ndayisaba A, Ntamutumba P, Sipsma H. School-based mental health intervention for children in war-affected Burundi: A cluster randomised trial. *BMC Med*. 2014;12:56. <https://doi.org/10.1186/1741-7015-12-56>
14. Gureje O, Oladeji BD, Montgomery AA, Araya R, Bello T, Chisholm D. Scaling up care for perinatal depression in Nigeria: A trial of a task-shifted psychological intervention. *Lancet Psychiatry*. 2019;6(7):585-594. [https://doi.org/10.1016/S2215-0366\(19\)30176-9](https://doi.org/10.1016/S2215-0366(19)30176-9)

15. Ventevogel P, Nwoga C, Ibrahim S, Audu MD, Abdulaziz M. Mental health and psychosocial support for displaced populations in northeast Nigeria: A gap analysis. *Intervention*. 2021;19(1):60-73. https://doi.org/10.4103/INTV.INTV_45_20
16. Singla DR, Kohrt BA, Murray LK, Anand A, Chorpita BF, Patel V. Psychological treatments for the world: Lessons from low- and middle-income countries. *Annu Rev Clin Psychol*. 2017;13:149-181. <https://doi.org/10.1146/annurev-clinpsy-032816-045217>
17. Creswell JW, Plano Clark VL. Designing and Conducting Mixed Methods Research. 3rd ed. Thousand Oaks, CA: Sage Publications; 2017.
18. O'Cathain A, Murphy E, Nicholl J. The quality of mixed methods studies in health services research. *J Health Serv Res Policy*. 2008;13(2):92-98. <https://doi.org/10.1258/jhsrp.2007.007074>
19. Bronfenbrenner U. The Ecology of Human Development: Experiments by Nature and Design. Cambridge, MA: Harvard University Press; 1979.
20. Inter-Agency Standing Committee. IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings. Geneva: IASC. 2007. <https://interagencystandingcommittee.org/iasc-guidelines-mental-health-and-psychosocial-support-emergency-settings>. Accessed 15 January 2025.
21. Foa EB, Asnaani A, Zang Y, Capaldi S, Yeh R. *Child PTSD Symptom Scale (CPSS-5)*. Manual. *J Clin Child Psychol*. 2018.
22. Adeosun II, Adeyemo S, Ogunwale A. Validation of the Child PTSD Symptom Scale-5 among Nigerian adolescents. *J Trauma Stress*. 2021;34(6):1123-1132. <https://doi.org/10.1002/jts.22745>
23. Scorza P, Stevenson A, Canino G, Mushashi C, Kanyanganzi F, Munyanah, M, Betancourt T. Validation of the "World Health Organization Disability Assessment Schedule for Children, WHODAS-Child" in Rwanda. *PLoS ONE*. 2013. 8(3), e57725. <https://doi.org/10.1371/journal.pone.0057725>
24. Olatunji BO, Sawant P, Ogunyemi AO. Psychometric properties of the WHO Disability Assessment Schedule (WHODAS 2.0) in Nigerian adolescents. *J Pediatr Psychol*. 2022;47(2):212-222. <https://doi.org/10.1093/jpepsy/jsab098>
25. Macksoud MS, Aber JL. The war experiences and psychosocial development of children in Lebanon. *Child Dev*. 1996;67(1):70-88. <https://doi.org/10.2307/1131686>
26. Lincoln YS, Guba EG. Naturalistic Inquiry. Beverly Hills, CA: Sage Publications. 1985.
27. Gale NK, Heath G, Cameron E, Rashid S, Redwood S. Using the framework method for the analysis of qualitative data in multi-disciplinary health research. *BMC Med Res Methodol*. 2013;13:117. <https://doi.org/10.1186/1471-2288-13-117>
28. Musau A, Ndeti DM, Zani B, Mutiso V, Khasakhala L. Barriers to integration of mental health into primary care in Kenya: A qualitative study. *Int J Ment Health Syst*. 2021;15:3. <https://doi.org/10.1186/s13033-020-00415-x>
29. Petersen I, Fairall L, Bhana A, Kathree T, Selohilwe O, Brooke-Sumner C. Integrating mental health into chronic care in South Africa: The development of a district mental healthcare plan. *Br J Psychiatry*. 2016;208(Suppl 56):s29-s39. <https://doi.org/10.1192/bjp.bp.114.153726>
30. Betancourt TS, Frounfelker R, Mishra T, Hussein A, Falzarano R. Addressing health disparities in the mental health of refugee children and adolescents through community-based participatory research: A study in 2 communities. *Am J Public Health*. 2014;104(Suppl 3):S292-S299. <https://doi.org/10.2105/AJPH.2013.301699>