

Psychological and Behavioral Manifestations of Trauma in Children in Bafanji Village, North West Region-Cameroon

Dr. Youmbi Mbenowol Carene (PhD)

Department of Counselling Psychology, Faculty of Education, The University of Bamenda

DOI: <https://doi.org/10.47772/IJRISS.2026.100700854>

Received: 25 July 2026; Accepted: 30 July 2026; Published: 14 August 2026

ABSTRACT

This study examined the psychological and behavioral manifestations of trauma among children in Bafanji village, Northwest Region of Cameroon, a community affected by the ongoing socio-political crisis in the Anglophone regions. Using a quantitative cross-sectional survey design, data were collected from children aged 6 to 17 years, and from parents/guardians, using structured questionnaires adapted from the Child PTSD Symptom Scale (CPSS) and the Strengths and Difficulties Questionnaire (SDQ). Data collection took place while the security situation in Bafanji remained volatile, which restricted movement and household access and reduced the number of fully completed child records; after data cleaning, 68 child respondents had complete, analyzable records. Descriptively, children in Bafanji reported multiple trauma-related symptoms, with increased arousal ($M = 1.26$) and negative thoughts and feelings ($M = 1.25$) emerging as the most frequently reported indicators. Behavioral difficulties were also common, with emotional symptoms ($M = 1.47$), conduct problems ($M = 1.46$), hyperactivity ($M = 1.44$), and peer problems ($M = 1.44$) all reflecting moderate to substantial distress. Chi-square tests of independence and Spearman correlations between trauma-symptom indicators and behavioral indicators did not reach statistical significance, and a multiple regression predicting overall behavioral difficulties from trauma symptoms was likewise non-significant ($R^2 = .066$, $p = .223$); these null statistical results are interpreted in light of the small sample, the restricted variance in trauma-exposure type, and the single-item measurement format used for each symptom domain. Despite the absence of statistically significant associations, the descriptive findings indicate that trauma-exposed children in Bafanji are carrying a substantial psychological and behavioral burden. The study concludes that trauma-informed, child-centered, and community-based interventions remain warranted in conflict-affected settings such as Bafanji, and that future research with larger, multi-site samples and fully validated multi-item instruments is needed to establish the statistical relationships this study could not confirm.

Keywords: Trauma, child mental health, behavioral manifestations, PTSD, conflict-affected children, Bafanji, Cameroon.

INTRODUCTION AND BACKGROUND OF THE STUDY

Mental health has increasingly become a focal point in global health discussions, particularly as its significance to overall well-being is widely recognized. Childhood is a critical stage of physical, emotional, and psychological development, and it is profoundly affected by mental health challenges, especially when traumatic experiences are involved (World Health Organization [WHO], 2021). In conflict-affected regions such as the Northwest Region of Cameroon, children often endure significant trauma, ranging from displacement and violence to the loss of loved ones. These traumatic experiences can leave lasting effects on their mental health, including post-traumatic stress disorder (PTSD), anxiety, depression, and behavioral difficulties (Felitti et al., 1998).

The village of Bafanji, located in the Ngoketunjia Division, provides a compelling context for exploring the impact of trauma on children's mental health. As a community affected by the ongoing socio-political crisis in the Anglophone regions of Cameroon, Bafanji has witnessed significant upheaval since 2016. Children in such environments are at high risk of adverse mental health outcomes due to prolonged exposure to stressors, including insecurity, forced migration, and limited access to basic needs and services (Mboua et al., 2020).

The relationship between trauma and mental health is well documented in psychological and medical literature. Trauma, particularly in childhood, disrupts a child's sense of safety, leading to long-term psychological and emotional difficulties if left untreated (Anda et al., 2006). The Adverse Childhood Experiences (ACEs) framework identifies early exposure to trauma as a significant determinant of mental health outcomes across the lifespan, linking it to immediate challenges such as poor academic performance and social withdrawal, as well as long-term consequences such as substance abuse and chronic mental health disorders (Bethell et al., 2014). This underscores the importance of early identification and intervention to mitigate these effects, particularly in vulnerable populations.

In Bafanji, the socio-cultural context further complicates the mental health landscape. Traditional beliefs and practices often stigmatize mental health conditions, deterring families from seeking formal care (Ndeti et al., 2021). Additionally, the erosion of communal support systems due to conflict has left children with fewer avenues for coping and resilience. In this context, community-driven support remains crucial in providing culturally appropriate, trauma-informed care that addresses the unique needs of these children.

This study therefore seeks to explore the relationship between trauma and mental health in children, using Bafanji as a case study. It aims to assess the types and extent of trauma experienced by children and evaluates its psychological impacts. The study contributes to the broader discourse on child mental health in conflict-affected regions, offering insights that can inform policy, practice, and advocacy.

The importance of this study extends beyond Bafanji. With conflict and displacement increasingly affecting populations worldwide, understanding how trauma impacts children's mental health is critical to safeguarding the well-being of future generations (UNICEF, 2022). This study aligns with global efforts to promote mental health and well-being, particularly in marginalized and underserved communities.

Historically, trauma has been a subject of interest in psychology and mental health for decades, with its effects on individuals, particularly children, gaining prominence after World War II. During this period, studies began to document the psychological impacts of war on children, including symptoms of post-traumatic stress, anxiety, and depression (van der Kolk, 2014). This research laid the foundation for understanding trauma as a significant determinant of mental health. The recognition of trauma as a global issue grew with the development of the Diagnostic and Statistical Manual of Mental Disorders (DSM) in the 1980s, which included PTSD as a distinct mental health condition (American Psychiatric Association, 1980).

In recent decades, research has expanded to address trauma in low- and middle-income countries, particularly in conflict zones. The 21st century has seen an alarming increase in the number of children affected by conflict, with over 420 million children currently living in war zones worldwide (Save the Children, 2019). The Cameroonian context, especially in the Northwest and Southwest regions, reflects this global trend, with children disproportionately affected by the socio-political crisis that began in 2016. The protracted conflict in these regions has led to mass displacement, exposure to violence, and disruption of family and community structures, all of which exacerbate the trauma experienced by children (Mboua et al., 2020).

Conceptually, trauma is understood as an emotional response to an event or series of events that overwhelms an individual's ability to cope (American Psychological Association, 2020). For children, traumatic events may include exposure to violence, abuse, neglect, or forced displacement. These experiences disrupt their emotional and psychological development, often leading to mental health disorders such as PTSD, anxiety, and depression (Felitti et al., 1998). Mental health, as defined by the World Health Organization, is a state of well-being that allows individuals to cope with stress, work productively, and contribute to their communities (WHO, 2013).

The conceptual framework of this study focuses on understanding trauma as both a cause and consequence of poor mental health in children. It emphasizes the interplay between trauma, mental health, and the social environment, including family, community, and institutional support systems. For children in Bafanji, these factors are shaped by the socio-political crisis and the limited availability of mental health resources.

Theoretically, this study is informed by several perspectives that explore the relationship between trauma and mental health. The Ecological Systems Theory by Bronfenbrenner (1979) provides a framework for understanding how different environmental systems microsystem, mesosystem, exosystem, macrosystem, and chronosystem interact to influence a child's mental health. Trauma disrupts these systems, particularly the microsystem (family and immediate environment), creating a ripple effect that impacts the child's overall well-being.

The Adverse Childhood Experiences (ACEs) framework, developed by Felitti et al. (1998), highlights the long-term effects of childhood trauma on mental and physical health. According to this framework, exposure to adverse experiences, such as violence or neglect, increases the risk of mental health disorders and other negative outcomes in adulthood.

Additionally, the Trauma-Informed Care (TIC) approach emphasizes the importance of understanding trauma's impact and incorporating this awareness into care practices (SAMHSA, 2014). This approach guides trauma-informed interventions, ensuring that mental health services are sensitive to the needs and experiences of trauma-affected children.

Contextually, the Northwest Region of Cameroon, including Bafanji, has been severely affected by the socio-political crisis that began in 2016. This conflict, rooted in historical grievances and political tensions between English-speaking and French-speaking communities, has resulted in widespread violence, displacement, and loss of livelihoods (International Crisis Group, 2017; World Bank, 2021). Children in Bafanji are among the most vulnerable populations, facing not only the direct effects of violence but also the indirect consequences of disrupted education, family separation, and reduced access to healthcare (UNHCR, 2022). At the time of this study, insecurity in and around Bafanji remained active and unpredictable, a condition that shaped not only children's lived experience of trauma but also, as described in the Methods section below, the logistics of data collection itself.

This study seeks to explore the impact of trauma on the mental health of children in Bafanji within historical, conceptual, theoretical, and contextual frameworks, with the aim of informing strategies for improved mental health support in conflict-affected settings.

Statement of the Problem

Children in conflict-affected regions such as Bafanji in the Northwest Region of Cameroon are increasingly exposed to traumatic experiences, including witnessing violence, displacement, and the loss of family members, all of which profoundly disrupt their mental health and development. In the context of the ongoing socio-political crisis, many children in Bafanji live with the psychological burden of separation, fear, insecurity, and bereavement, conditions that are often associated with anxiety, depression, withdrawal, aggression, and other behavioral difficulties. Although community-based mental health support efforts exist, there remains a lack of comprehensive data on the specific ways trauma manifests in children in this setting. This gap highlights the urgent need for research that systematically examines how trauma affects children's psychological and behavioral functioning in Bafanji.

Objective

To examine the psychological and behavioral manifestations of trauma in children in Bafanji.

Research Question

How does trauma manifest in the mental health and behavior of children in Bafanji?

This study is significant because it generates evidence on how trauma is associated with the mental health and behavior of children in Bafanji, a conflict-affected community in Cameroon. Its findings will be useful to policymakers, mental health practitioners, educators, caregivers, and community organizations working to improve child well-being in crisis settings. The study also adds to the limited literature on child trauma and

community-based mental health support in Cameroon, while highlighting the need for stronger local responses to trauma-affected children.

It focuses on children in Bafanji exposed to trauma in the context of the ongoing socio-political crisis in the Northwest Region of Cameroon. It examines the psychological and behavioral manifestations of trauma and is limited to children aged 6 to 17 years, covering experiences linked to the crisis from 2016 to the present.

The study is justified by the urgent need to understand how trauma is associated with children's mental health and behavior in conflict-affected communities. Children in Bafanji are exposed to insecurity, displacement, and loss, yet local evidence on their mental health needs remains limited. By focusing on this issue, the study supports more effective, child-centered interventions and strengthens the case for trauma-informed community mental health care.

Materials and Methods

This research is grounded in the relationship between trauma as the independent variable and children's mental health as the dependent variable in Bafanji. Trauma is understood as an event or series of events that overwhelms a child's ability to cope, leading to emotional, psychological, and behavioral distress (American Psychiatric Association [APA], 2013). In this study, trauma includes exposure to violence, displacement, loss of loved ones, insecurity, and other conflict-related stressors that may result in acute, chronic, or complex trauma (van der Kolk, 2014). Trauma affects children in multiple ways, including withdrawal, aggression, poor concentration, nightmares, and developmental delays. Early exposure to adversity can also disrupt brain development and increase vulnerability to long-term mental health problems such as anxiety, depression, and PTSD (Pynoos et al., 2008; Shonkoff & Garner, 2012). In Bafanji, where children have lived through the effects of conflict and instability, trauma is both an individual and communal challenge, affecting children's daily functioning and overall well-being.

Mental health is defined by the World Health Organization as a state of well-being in which an individual can cope with normal stresses of life, work productively, and contribute to the community (WHO, 2021; WHO, 2013). For children, mental health is reflected in emotional regulation, social functioning, and behavioral stability. Trauma can disrupt these areas, leading to symptoms such as anxiety, depression, emotional numbness, hypervigilance, avoidance, and behavioral problems (Felitti et al., 1998). These difficulties can interfere with learning, relationships, and healthy development.

The framework also recognizes the importance of family and community support in shaping children's responses to trauma. A stable and supportive family environment can reduce the negative psychological effects of trauma, while disruption of family structures through displacement, death, or separation can intensify distress (Bowlby, 1988). In conflict-affected communities like Bafanji, community-based support systems such as schools, religious institutions, and local organizations are essential in promoting resilience and recovery.

Overall, this conceptual framework shows that the impact of trauma on children's mental health in Bafanji is shaped not only by the traumatic event itself but also by family support, community resources, resilience, and access to care.

The study is informed by Attachment Theory (Bowlby, 1969), Trauma Theory (Herman, 1992), Ecological Systems Theory (Bronfenbrenner, 1979), and Resilience Theory (Masten, 2001). Together, these theories help explain how trauma is associated with children's mental health and behavior in Bafanji, and why family, community, and institutional support are essential for recovery.

Attachment Theory emphasizes the importance of early relationships between children and their primary caregivers in shaping emotional security and later development. According to Bowlby, secure attachment develops when caregivers are consistently responsive, while insecure attachment emerges when care is inconsistent, neglectful, or frightening. In trauma-affected contexts such as Bafanji, displacement, violence, and family separation can disrupt attachment, potentially contributing to emotional dysregulation, distrust, aggression, and difficulty forming stable relationships.

Judith Herman's Trauma Theory explains trauma recovery as a process that moves through three stages: safety and stabilization, remembrance and mourning, and reconnection and reintegration. In Bafanji, where children may experience violence, displacement, and loss, the first priority is restoring safety and emotional stability. The theory also shows that trauma is not only about the event itself but about its impact on identity, trust, emotional regulation, and relationships.

Bronfenbrenner's Ecological Systems Theory explains child development as shaped by multiple interacting environments. These include the microsystem (family, peers, school), mesosystem (connections between those settings), exosystem (indirect influences such as services and institutions), macrosystem (broader cultural and political context), and chronosystem (change over time, including the ongoing crisis itself). Trauma disrupts these systems simultaneously, which is one reason its effects are difficult to isolate statistically to any single symptom pathway a point this study's findings, discussed below, illustrate directly.

Resilience Theory focuses on children's ability to adapt positively despite adversity. Rather than being a fixed trait, resilience is shaped by protective factors such as caregiver support, emotional regulation, schooling, and community networks. In conflict settings like Bafanji, resilience helps explain why some children cope better than others despite similar traumatic exposure. This theory also draws attention to the role of family, teachers, and community-based interventions in supporting recovery.

LITERATURE REVIEW: CRITICAL SYNTHESIS

The empirical literature on childhood trauma in conflict settings converges on a consistent core finding that exposure to violence, displacement, and loss is associated with PTSD symptoms, emotional numbing, aggression, withdrawal, and poor concentration (Betancourt et al., 2010; Shalev, 2012) but it is far less settled on the mechanisms that connect exposure to outcome, and on how those mechanisms should be measured. Perry (2006) and Cicchetti and Toth (2005) locate the mechanism at the neurodevelopmental level, arguing that early trauma disrupts brain regions governing memory, stress response, and decision-making, and that this is precisely why early intervention matters. This neurodevelopmental account sits in productive tension with intervention-outcome studies: Hassan et al. (2014) and Schaal et al. (2010) report measurable improvements in PTSD and emotional well-being following psychosocial support in post-conflict settings, while Silverman et al. (2008) and Vernberg et al. (2004) attribute comparable gains specifically to trauma-focused Cognitive Behavioral Therapy. Neither strand of evidence resolves whether symptom change reflects neurobiological recovery, behavioral re-learning, or the removal of ongoing stressors a distinction the current literature has not adequately tested in low-resource, actively conflict-affected sites.

A second unresolved debate concerns the level at which intervention is most effective. Tol et al. (2013) and Perry et al. (2016) find that programs engaging teachers, caregivers, and local leaders outperform individually delivered therapy in low-resource conflict settings, and school-based counseling and peer support have shown similar promise (Sharma et al., 2015; Kisanga et al., 2011). This community-level evidence base is, however, drawn overwhelmingly from a small number of well-studied contexts Rwanda, Sierra Leone, Syria and rarely from Anglophone Cameroon specifically. Mboua et al. (2020) is one of the few studies to document psychological distress tied to the Cameroonian security crisis directly, and it, like most of the regional literature, relies on adult or mixed-age samples rather than isolating children's responses. This is a genuine gap: much of what is assumed about childhood trauma in the Cameroonian Anglophone crisis is extrapolated from adjacent African conflict contexts (Schaal et al., 2010, on Rwanda; Hassan et al., 2014, on Syria) rather than established locally.

A third, more methodological, debate concerns measurement itself. Much of the literature cited above relies on multi-item, psychometrically validated instruments administered by trained clinicians or researchers with time and access to repeat contact. Very little of it addresses how trauma should be measured when access to a community is itself restricted by active insecurity the exact condition under which the present study was conducted in Bafanji. This is the specific gap the current study addresses: it generates Cameroon-specific, child-level evidence from an actively insecure setting, while also surfacing, through its own methodological experience, how insecurity constrains not just children's exposure to trauma but researchers' ability to measure

it rigorously. The findings and limitations reported below should be read as a direct empirical illustration of that gap, not only as a set of trauma-symptom estimates.

Research Design

This study adopted a quantitative cross-sectional survey design to examine the psychological and behavioral manifestations of trauma in children in Bafanji. The design allowed for the measurement of trauma exposure and mental health indicators at a single point in time, while also enabling statistical analysis of relationships between variables. The study was conducted in Bafanji, a community in the Ngoketunjia Division of the Northwest Region of Cameroon.

Population, Sampling, and Data Collection under Insecurity

The target population consisted of children aged 6 to 17 years, together with selected parents or guardians involved in their care; this age range was the specific sampling target for the child sub-sample. Data collection took place while the socio-political crisis in the Northwest Region remained active, and Bafanji itself was experiencing a period of heightened insecurity at the time fieldwork was conducted. This materially affected data collection: several quarters, including Njanung, Tonkung, and Mbangang, were particularly difficult to access during the data collection period, movement in and out of the community more broadly was restricted and unpredictable, some households could not safely be reached or re-visited, and a number of questionnaires that were started could not be completed. Of 150 questionnaire records initiated, 65 were left with no usable responses beyond basic identifying fields and were excluded; leaving 85 respondents with analyzable data 68 children aged 6 to 17 and 16 parents/guardians, all resident in Bafanji. The parent/guardian responses are reported descriptively in this paper as contextual corroboration; the primary child mental-health analysis reported below (Tables 1–5) is restricted to the 68 children, since the study's objective and instruments target the child population specifically. This shortfall from the originally intended sample size is itself a finding worth naming plainly: it reflects the practical difficulty of conducting child mental health research in a community under active insecurity, and is discussed further in the Limitations section.

Instrumentation

Data were collected using a structured questionnaire that adapted items from the Child PTSD Symptom Scale (CPSS) and the Strengths and Difficulties Questionnaire (SDQ), alongside a set of items on coping behavior and a brief section on prior contact with mental health support services. The CPSS and SDQ items were translated into chufieh (local language spoken in Bafanji) by a local expert prior to administration, to ensure that children in Bafanji could understand and respond to the items in their own language. Given the constraints of fieldwork in an actively insecure setting, the questionnaire used a single indicator item to represent each trauma-symptom domain (re-experiencing, avoidance, increased arousal, negative thoughts and feelings) and each behavioral domain (emotional symptoms, conduct problems, hyperactivity, peer problems, prosocial behavior), rather than the full multi-item versions of the CPSS and SDQ. This adapted, abbreviated format was a deliberate trade-off to keep administration time short and feasible under field conditions, but it is a genuine limitation of the study, discussed in the Limitations section: single-item indicators cannot be assessed for internal-consistency reliability in the same way multi-item subscales can, and they are less precise than the validated instruments they are adapted from.

For children who could not read, the translated questionnaire items were read aloud to them by the field data collector, and their verbal responses were then recorded by the data collector directly on the questionnaire. This assisted-administration procedure ensured that limited literacy did not prevent children, particularly younger respondents, from participating meaningfully in the study.

Two further points on the data merit direct disclosure. First, the items intended to capture re-experiencing trauma and avoidance of reminders produced identical response patterns for every one of the 68 children in the analyzable dataset. This could reflect a genuine, strong empirical overlap between these two symptom domains in this population, or it could reflect a duplication introduced during questionnaire administration or data entry;

the original field instruments could not be located to adjudicate between these explanations, so the two items are treated as a single combined indicator in the analyses below, and the duplication is flagged as a measurement limitation. Second, although coping items were included in the questionnaire, they did not form a statistically coherent single scale (Cronbach's alpha for the five coping items was $-.35$ in this sample); they are therefore reported descriptively as separate items rather than summed into a composite coping score.

Data Analysis

Data analysis involved descriptive and inferential statistics. Frequencies, percentages, means, and standard deviations were used to summarize the data. Internal-consistency reliability was assessed with Cronbach's alpha wherever a multi-item scale existed. Chi-square tests of independence were used to examine associations between each trauma-symptom indicator and each behavioral indicator; because the original five-level response categories produced expected cell counts below the conventional threshold in the majority of cells, categories were collapsed into three bands (not at all / occasional / frequent) before testing, and Spearman rank correlations were computed as a supplementary, assumption-robust check on the same relationships. A multiple linear regression was used to test whether trauma-symptom indicators predicted an overall behavioral-difficulties score (the sum of emotional symptoms, conduct problems, hyperactivity, and peer problems, following the Strengths and Difficulties Questionnaire's standard Total Difficulties composite, which excludes the prosocial behavior subscale). Data were processed using Python (pandas, scipy).

Ethical Considerations

Ethical approval was obtained before data collection. Informed consent was obtained from parents or guardians, and assent was obtained from the children, in line with accepted ethical standards for research involving minors. Confidentiality and anonymity were maintained, and support was made available for participants who experienced distress during the study. Data collection procedures were also adapted in real time to participant and field-team safety, consistent with ethical guidance for research in active conflict settings a further reason the achieved sample differs from what a stable-context study of this kind would typically produce.

FINDINGS

Demographic Profile of Child Respondents (N = 68)

Table 1 presents the demographic profile of the 68 children with analyzable records, reported as frequencies and percentages.

Table 1: Demographic and Trauma-Exposure Profile of Child Respondents (N = 68)

Variable	Category	n	%
Sex	Female	36	52.9
	Male	32	47.1
Age group	6–8 years	11	16.2
	9–11 years	31	45.6
	12–14 years	17	25.0
	15–17 years	9	13.2
Living situation	Both parents	40	58.8

	With a relative	20	29.4
	With one parent	8	11.8
Internally displaced	Yes	47	69.1
	No	21	30.9
Primary trauma exposure	Lost a family member (violence/other)	43	63.2
	Displaced from home/community	9	13.2
	Witnessed violence (killing, fighting)	6	8.8
	Experienced physical abuse	6	8.8
	Other trauma	2	2.9
	Experienced emotional abuse	1	1.5
	Experienced sexual abuse	1	1.5

All respondents resided in Bafanji. The demographic profile shows a roughly balanced sex distribution, a sample concentrated in middle childhood (76.5% aged 9–14), a majority living with at least one parent, and a majority (69.1%) reporting internal displacement. Loss of a family member due to violence or other crisis-related causes was by far the most common trauma exposure (63.2%), meaning the sample's trauma-exposure profile is relatively homogeneous a point returned to in the Discussion and Limitations, since restricted variance in exposure type limits the ability of any statistical test to detect exposure-outcome relationships.

Psychological and Behavioral Manifestations of Trauma

Table 2 presents descriptive statistics for the trauma-symptom and behavioral indicators, based on the 68 children with complete records. Because the re-experiencing and avoidance items were found to be identical for every respondent (see Instrumentation above), they are reported as a single combined indicator here.

Table 2: Descriptive Statistics for Trauma-Symptom and Behavioral Indicators (N = 68)

Variable	N	Mean	Median	Mode	SD	Variance	25th Pctl	50th Pctl	75th Pctl
Re-experiencing / avoidance of reminders (combined item)	68	1.03	0.00	0	1.393	1.939	0.00	0.00	2.00
Increased arousal	68	1.26	1.00	0	1.400	1.959	0.00	1.00	3.00
Negative thoughts and feelings	68	1.25	1.00	0	1.408	1.981	0.00	1.00	3.00
Emotional symptoms	68	1.47	1.50	2	0.559	0.313	1.00	1.50	2.00
Conduct problems	68	1.46	1.00	1	0.531	0.282	1.00	1.00	2.00

Hyperactivity	68	1.44	1.50	2	0.608	0.370	1.00	1.50	2.00
Peer problems	68	1.44	1.50	2	0.608	0.370	1.00	1.50	2.00
Prosocial behavior	68	1.49	2.00	2	0.586	0.343	1.00	2.00	2.00

Among trauma-symptom indicators, increased arousal ($M = 1.26$) and negative thoughts and feelings ($M = 1.25$) were the most frequently endorsed, consistent with children reporting hypervigilance, being easily startled, sleep disturbance, hopelessness, and guilt. Among behavioral indicators, emotional symptoms had the highest mean ($M = 1.47$), followed closely by prosocial behavior ($M = 1.49$), conduct problems ($M = 1.46$), hyperactivity, and peer problems (both $M = 1.44$). Descriptively, these values indicate that trauma-related symptoms and behavioral difficulties are both common and roughly comparable in magnitude across domains in this sample there is no domain that stands out as markedly more affected than the others.

Internal Consistency Reliability

Cronbach's alpha was computed for each set of items that was intended to function as a scale in this sample. Because several symptom and behavior domains were each measured with a single item, alpha could only be computed at the level of the broader item sets shown in Table 3, not for each single-item subscale individually this is itself a direct consequence of the abbreviated, single-item instrumentation discussed above.

Table 3: Internal Consistency Reliability of Item Sets (N = 68)

Item set	Number of items	Cronbach's α	Interpretation
Trauma-symptom items (CPSS-adapted)	4 (3 unique after removing the duplicate item)	0.977	Very high reflects the item duplication and near-collinearity noted above rather than strong measurement precision
Behavioral items (SDQ-adapted, all 5 subscale indicators)	5	0.901	Good internal consistency
Behavioral difficulties composite (emotional, conduct, hyperactivity, peer — excludes prosocial)	4	0.869	Good internal consistency
Coping items	5	−0.35	Poor items do not form a coherent single scale; reported as separate items in Table 4 note below rather than summed

Relationship Between Trauma Symptoms and Behavioral Manifestations

Chi-square tests of independence were conducted between each of the three trauma-symptom indicators (re-experiencing/avoidance combined, increased arousal, negative thoughts and feelings) and each of the five behavioral indicators, using three collapsed response bands (not at all / occasional / frequent) to reduce the proportion of cells with expected counts below 5. Spearman rank correlations were computed on the original ordinal scores as a supplementary, assumption-robust check. Table 4 summarizes both sets of results.

Table 4: Chi-Square and Spearman Correlation Results, Trauma Symptoms $\times$ Behavioral Indicators (N = 68)

Trauma symptom	Behavioral indicator	χ^2 (df=4)	p	Cramér's V	Spearman ρ	p (ρ)
Re-experiencing/avoidance	Emotional symptoms	7.83	0.098	0.240	-0.14	0.250
Re-experiencing/avoidance	Conduct problems	7.72	0.102	0.238	-0.07	0.561
Re-experiencing/avoidance	Hyperactivity	4.52	0.341	0.182	0.08	0.533
Re-experiencing/avoidance	Peer problems	6.67	0.155	0.221	-0.15	0.215
Re-experiencing/avoidance	Prosocial behavior	7.36	0.118	0.233	-0.13	0.280
Increased arousal	Emotional symptoms	9.03	0.060	0.258	-0.07	0.559
Increased arousal	Conduct problems	7.45	0.114	0.234	-0.06	0.632
Increased arousal	Hyperactivity	7.80	0.099	0.239	0.15	0.214
Increased arousal	Peer problems	4.89	0.299	0.190	-0.04	0.736
Increased arousal	Prosocial behavior	6.76	0.149	0.223	-0.01	0.918
Negative thoughts/feelings	Emotional symptoms	9.72	0.045*	0.267	-0.06	0.648
Negative thoughts/feelings	Conduct problems	8.53	0.074	0.250	-0.04	0.725
Negative thoughts/feelings	Hyperactivity	8.63	0.071	0.252	0.17	0.177
Negative thoughts/feelings	Peer problems	6.83	0.145	0.224	-0.01	0.931
Negative thoughts/feelings	Prosocial behavior	8.13	0.087	0.245	0.00	0.983

*One pairing (negative thoughts/feelings $\times$ emotional symptoms) reached the conventional $\alpha = .05$ threshold uncorrected. With 15 tests conducted, however, this is within the number of false positives expected by chance alone, and it does not survive a Bonferroni correction for multiple comparisons (adjusted $\alpha = .003$). It is reported here for transparency but is not interpreted as a reliable finding.

None of the 15 chi-square tests reached significance after accounting for multiple comparisons, and none of the corresponding Spearman correlations reached significance either (all $p > .17$). Between 20% and 33% of cells across these tables had expected counts below 5 even after collapsing categories, meaning chi-square results should be read as indicative rather than definitive. Taken together, the two independent analytic approaches converge on the same conclusion: in this sample, trauma-symptom indicators and behavioral indicators are not statistically distinguishable from independence.

Regression Analysis: Trauma Symptoms Predicting Behavioral Difficulties

A multiple linear regression tested whether trauma-symptom indicators predicted children's overall behavioral-difficulties score (emotional symptoms + conduct problems + hyperactivity + peer problems). Because the re-experiencing and avoidance items were identical, only one was retained as a predictor alongside increased arousal and negative thoughts and feelings.

Table 5: Multiple Regression Predicting Behavioral Difficulties from Trauma Symptoms (N = 68)

Predictor	B	SE	t	p	95% CI
Intercept	5.847	0.320	18.29	<.001	[5.208, 6.485]
Re-experiencing/avoidance	-0.531	0.347	-1.53	0.130	[-1.223, 0.161]
Increased arousal	-2.847	1.961	-1.45	0.152	[-6.765, 1.072]
Negative thoughts and feelings	3.287	1.970	1.67	0.100	[-0.649, 7.223]

The overall model was not statistically significant, $R^2 = .066$, adjusted $R^2 = .022$, $F(3, 64) = 1.50$, $p = .223$, and no individual predictor reached significance. Increased arousal and negative thoughts and feelings were also very strongly correlated with each other ($r = .996$), indicating severe multicollinearity between these two nominally distinct trauma-symptom domains; in practice they are not statistically separable in this dataset, which is a further reason to interpret the individual coefficients above with caution rather than as evidence that any one symptom domain is more or less predictive than another.

DISCUSSION

The descriptive findings show that children in Bafanji are carrying a substantial trauma-symptom and behavioral-difficulty burden: mean scores across all eight indicators in Table 2 sit above the midpoint of their respective scales, and the large majority of children in this sample have experienced a serious loss or displacement event. This pattern is consistent with the broader conflict-trauma literature, which links chronic exposure to violence, displacement, and loss with elevated PTSD symptoms, emotional numbing, and behavioral disturbance (Betancourt et al., 2010; Shalev, 2012), and with Ecological Systems Theory's premise that a destabilized surrounding environment, family, school, community, compounds an individual child's distress (Bronfenbrenner, 1979).

At the same time, the statistical analyses in Tables 4 and 5 did not find a significant association between trauma-symptom indicators and behavioral indicators, and this null result deserves a direct explanation rather than being set aside. Three features of this study, each already noted in the Methods, plausibly account for it. First, the trauma-exposure profile in this sample is relatively homogeneous — nearly two-thirds of children share the same broad exposure category (loss of a family member) — which restricts the variance a statistical test needs to detect a relationship, even if one exists in the underlying population. Second, each symptom and behavior domain was measured with a single item rather than the multi-item batteries used in most of the cited validated-instrument studies (e.g., Silverman et al., 2008; Vernberg et al., 2004), which reduces measurement precision and statistical power. Third, the sample size itself ($n = 68$) was constrained by the security conditions under which data collection occurred, as described in the Methods; a larger sample, collected under less restrictive conditions, would have substantially more power to detect the moderate-sized associations this literature would predict.

This combination of high descriptive symptom levels alongside a non-significant statistical relationship is itself informative for research conducted in active conflict settings. It suggests that the practical difficulty of reaching, sampling, and administering multi-item instruments to children under conditions of insecurity is not a peripheral methodological footnote — it directly limits what can be statistically established, even when the underlying clinical picture (as reflected in the descriptive data) is concerning. Attachment Theory helps explain why the underlying picture is concerning regardless of statistical significance: when caregiver relationships are disrupted by death, separation, displacement, or chronic stress — conditions affecting 69.1% of this sample by displacement status

alone children lose a key source of safety and emotional regulation (Bowlby, 1988), and Herman's (1992) Trauma Theory frames restoring that safety as the necessary first stage of recovery, independent of whether any single symptom domain statistically predicts any single behavioral outcome.

Where this study's evidence base is comparatively thin is in triangulating these quantitative results against qualitative or narrative data from the same children, and against a wider set of Cameroon-specific studies; as noted in the Literature Review, most of the directly comparable community-level intervention evidence (Tol et al., 2013; Perry et al., 2016; Hassan et al., 2014; Schaal et al., 2010) comes from other conflict-affected countries, and Mboua et al. (2020) remains one of very few Cameroon-specific empirical anchors for this discussion. This underscores both the contribution of the present study as one of a small number of child-level, Bafanji-specific data points and the caution with which its statistical null results should be read: they describe this sample under these access conditions, not a settled claim that trauma and behavioral difficulties are unrelated in Bafanji's children more broadly.

Implications

The findings have several implications for practice, policy, and community action, grounded primarily in the descriptive symptom levels reported in Table 2 rather than in the non-significant statistical associations reported in Tables 4 and 5.

For mental health practitioners, the consistently elevated trauma-symptom and behavioral-difficulty scores across the sample highlight the need for trauma-informed counseling that is child-friendly and culturally sensitive, even in the absence of a statistically confirmed symptom-to-behavior pathway. Practitioners working in conflict-affected communities should be prepared to assess trauma comprehensively and provide interventions that address both emotional distress and behavioral functioning.

For educational systems, the findings suggest that schools should be seen as key entry points for mental health support. Teachers need basic training in recognizing trauma-related symptoms, while school-based counseling and referral pathways should be strengthened to support affected children and reduce academic and social disruption.

For policymakers, the results point to the need for integrated child mental health strategies within humanitarian and development planning, and for research infrastructure that can function under active insecurity since, as this study demonstrates, insecurity itself constrains the evidence base policymakers rely on.

For community structures, the findings emphasize the importance of strengthening family support, peer networks, and local leadership. Community-based psychosocial programs can help restore trust, emotional safety, and resilience, especially when formal services are limited.

Contribution to Counseling

This research contributes to counseling and psychology in several ways.

First, it adds context-specific evidence on how trauma manifests among children in a conflict-affected Cameroonian community, one of a small number of studies to generate child-level (rather than adult or mixed-age) data from this specific setting.

Second, it shows how theoretical models such as Trauma Theory, Ecological Systems Theory, Attachment Theory, and Resilience Theory can be applied together to interpret children's responses to conflict-related trauma, even where the accompanying quantitative associations are not statistically significant illustrating that theory-grounded interpretation and null statistical results are not in conflict, but complementary in a small, constrained sample.

Third, the study documents, transparently, how active insecurity affects the conduct of child mental health research itself sample attrition, abbreviated instrumentation, and restricted variance in exposure type which is a

methodological contribution relevant to other researchers working in similarly insecure settings across the region.

Finally, the study supports the development of culturally relevant counseling interventions, suggesting that effective counseling in Bafanji should not focus only on symptom reduction, but also on family support, school reintegration, peer relationships, and community healing.

Limitations

- Cross-sectional design: data were collected at a single point in time, so no causal or directional claims can be made between trauma exposure and psychological/behavioral outcomes.
- Small, single-site sample: the final analytic sample ($n = 68$ children) was drawn from one village (Bafanji) and was smaller than the number of respondents originally approached, due to access constraints under active insecurity described in the Methods notably, the quarters of Njanung, Tonkung, and Mbangang were particularly difficult to reach during the data collection period; findings should not be generalized beyond this specific sample without replication.
- Restricted variance in trauma-exposure type: 63.2% of children shared a single broad exposure category (loss of a family member), which limits statistical power to detect exposure-specific effects and may partly explain the non-significant chi-square and regression results.
- Abbreviated, single-item instrumentation: each trauma-symptom and behavioral domain was measured with one adapted item rather than the full multi-item CPSS and SDQ, which reduced measurement precision and made subscale-level reliability estimation impossible; two of the trauma-symptom items (re-experiencing and avoidance) were found to be identical across all respondents and were combined into a single indicator, a data-quality issue that could not be resolved because original field instruments were unavailable.
- Chi-square assumption violations: even after collapsing response categories into three bands, 20–33% of cells across the 15 chi-square tables had expected counts below 5, so those results should be treated as indicative rather than definitive; Spearman correlations were reported alongside them as a more assumption-robust check and converged on the same non-significant conclusion.
- Coping items did not form a reliable composite scale ($\alpha = -.35$) and are best understood as measuring distinct, independent coping behaviors rather than a single underlying coping construct; they are reported descriptively rather than as a summed score.
- No causal inference: none of the statistical associations tested support causal claims, and the non-significant results reported here should not be interpreted as evidence that trauma and behavioral difficulties are unrelated in this population only that this study, under these conditions, could not statistically confirm a relationship.

CONCLUSION

Children in Bafanji show consistently elevated trauma-symptom and behavioral-difficulty scores, and the large majority have experienced a serious conflict-related loss or displacement. While this study's statistical tests did not find a significant association between specific trauma-symptom indicators and specific behavioral indicator a result attributable in part to the small, homogeneous sample and abbreviated instrumentation necessitated by active insecurity during data collection the descriptive picture on its own indicates that the socio-political crisis has displaced children not only physically but also, plausibly, emotionally and developmentally.

While local support efforts may help alleviate some effects of trauma, there remains a need to strengthen their reach and sustainability, and a parallel need to strengthen the research infrastructure that can document child mental health needs even when a community is actively insecure. Recovery from trauma is a multi-stage process,

and meaningful support must be embedded in healthcare, education, and family systems to achieve long-term impact.

Recommendations

- Scale up child-focused mental health services in conflict-affected areas, with emphasis on trauma-informed care and staff training.
- Integrate trauma awareness into school curricula so teachers can recognize trauma signs and refer affected children appropriately.
- Enhance family-based interventions through caregiver counseling, support groups, and parenting education to rebuild attachment relationships.
- Expand safe spaces and peer support programs within communities so children can express themselves and heal in structured environments.
- Establish mobile outreach units and flexible, low-contact data-collection protocols to reach children in remote or insecure locations, both for service delivery and for future research.

Suggestions for Further Research

Future research should explore:

- The long-term effects of trauma on children's academic performance and life outcomes, using longitudinal rather than cross-sectional designs.
- How cultural and spiritual practices influence children's resilience and healing.
- Replication with a larger, multi-site sample and fully validated multi-item CPSS and SDQ instruments, to establish with adequate statistical power the trauma–behavior associations this study could not confirm.
- Gender differences in trauma experiences and recovery patterns.
- Mixed-methods studies that combine children's narratives with quantitative assessment, particularly to capture experience in communities where insecurity limits the feasibility of large-N quantitative designs alone.

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