

The Prevalence and Associated Factors of Post-Traumatic Stress Disorder in Children in Africa

Rose Adhiambo Opiyo*

School of Psychology, Department of Clinical Psychology, Daystar University, Nairobi, Kenya

Abstract: Post-Traumatic Stress Disorder (PTSD) is a significant mental health condition among children exposed to traumatic experiences such as violence, abuse, armed conflict, disasters, and displacement. Despite increasing recognition of childhood trauma as a major public health concern, the burden of PTSD among children remains underreported in many low and middle income countries, particularly within African settings where exposure to adverse experiences is often high. This review aimed to determine the prevalence of PTSD among children and to examine factors associated with variations in prevalence across different populations and settings. A literature review was conducted using studies involving children aged below 18 years. The findings demonstrated that PTSD in children is a multifaceted condition influenced by an interplay of trauma-related, individual, familial, and environmental factors. While global prevalence rates remain relatively moderate, significantly higher rates are observed in trauma-exposed and high-risk populations, particularly in African and conflict-affected settings. Key associated factors include trauma severity, female gender, older age, prior trauma exposure, parental psychopathology, and low social support. Understanding these factors is essential for developing targeted prevention and intervention strategies aimed at reducing the burden of PTSD among children and adolescents. Further research is needed to strengthen epidemiological evidence and guide context-specific interventions in African and other low-resource settings.

Keywords: Post-Traumatic Stress Disorder, PTSD, children, prevalence, trauma, child mental health, Africa, psychological disorders.

1. Introduction and Background to the study

Post-Traumatic Stress Disorder (PTSD) is a significant mental health condition affecting children and adolescents following exposure to traumatic events such as an accident, abuse, violence, poverty, natural disaster exposure, sexual assault, unexpected loss of a loved one, adverse childhood experiences and exposure to war. According to the American Psychiatric Association (APA), PTSD is characterized by intrusive memories, avoidance behaviors, negative changes in mood and cognition, and heightened arousal (APA, 2022).

Globally, the prevalence of PTSD among children and adolescents in the general population is estimated to range between approximately 3% and 8% (Alisic et al., 2014; Kessler et al., 2017). However, among trauma-exposed populations, prevalence rates increase substantially, with estimates

suggesting that approximately 15-20% of exposed children develop PTSD (Lewis et al., 2019; Sachser et al., 2017). More recent meta-analyses continue to support these findings, emphasizing that trauma exposure alone does not certainly lead to PTSD, but significantly increases the risk (Morina et al., 2018). In the United States the National Center for PTSD reports 5% lifetime PTSD in adolescents aged 13 to 18 years and a current prevalence rate of 3.9%. In a U.S epidemiological study, PTSD had a lifetime prevalence of 4.7-5% and 7.6% among trauma exposed youth. For younger children in pre-adolescence aged nine to ten years old a lifetime prevalence of 2.17% was reported. (Levin & Liu, 2023).

Although estimates tend to be somewhat higher in high-income regions, partly due to improved detection and reporting systems, large-scale cross-national studies, such as the WHO World Mental Health Surveys, show that PTSD prevalence in the general child population is relatively low, typically ranging between 1% and 5% across both Europe and Asia (Kessler et al., 2017; Koenen et al., 2017). However, prevalence rises significantly in populations exposed to trauma; meta-analytic data indicates that 12–20% of exposed youngsters get PTSD, underscoring the crucial role that trauma exposure plays in determining risk (Alisic et al., 2014).

Despite very equal baseline prevalence rates, comparative studies within Europe show significant variation between nations. Compared to Southern and Central European nations like Spain and Switzerland, nations like the United Kingdom, the Netherlands, France, and Germany typically report comparatively greater PTSD prevalence. According to extensive assessments, prevalence in general populations ranges from roughly 0.56% to 6.67%, with greater numbers frequently seen in Western and Northern Europe. These variations are explained by a number of reasons, such as cultural variations in symptom reporting, methodological discrepancies across research, and variation in trauma exposure (e.g., interpersonal violence and historical war). (European Regional Office of the World Health Organization, 2025).

Country-specific research further underscores the influence of diagnostic criteria: for example, studies in Germany demonstrate that prevalence estimates differ depending on whether DSM-5 or ICD-11 criteria are applied, reflecting definitional differences in PTSD classification. In the United

*Corresponding author: adhiambo1872@gmail.com

Kingdom, child-focused studies indicate very low baseline prevalence in early childhood (e.g., approximately 0.4% in children aged 5–6 years), but significantly higher rates among trauma-exposed groups, emphasizing the importance of developmental considerations in diagnosis. WHO regional reports further highlight that mental health disorders affect approximately one in seven children in Europe, with PTSD forming a significant component of trauma-related conditions, particularly among refugee and conflict-affected populations. (World Health Organization Regional Office for Europe, 2025)

In Asia, country-specific epidemiological evidence suggests a similar overall pattern of low baseline prevalence with larger heterogeneity according to environmental and socioeconomic factors. Although studies routinely show significant increases after stressful events like natural disasters, overall population estimates in China indicate a very low prevalence of PTSD among children. For instance, studies carried out during the COVID-19 pandemic and following significant earthquakes reveal a much higher prevalence of PTSD symptoms among impacted children; in high-stress situations, some meta-analytic estimates exceed 19.6%.

Although baseline incidence is still low in Japan, studies conducted after large disasters, like the 2011 Tohoku earthquake and tsunami, show considerable increases in PTSD symptoms among children and adolescents, which is in accordance with WHO results on the risk of disaster-related mental illness. According to the information that is currently available, the prevalence of PTSD in the general population in India varies somewhat, often falling between 2 and 5% worldwide. Children who have experienced interpersonal violence, accidents, or socioeconomic hardship have significantly higher rates. According to WHO statistics, under-diagnosis, poverty, and restricted access to mental health services are major contributors to prevalence. (World Health Organization, 2022).

Across broader Asian settings, including Southeast Asia and conflict-affected regions, PTSD prevalence in children can increase dramatically, often exceeding 20-30% in trauma-exposed populations. WHO World Mental Health Survey data indicate that overall PTSD prevalence appears lower in many Asian countries (approximately 3%) compared to high-income regions (approximately 6-7%); however, this difference is widely interpreted as reflecting disparities in detection, reporting practices, and mental health infrastructure rather than true differences in underlying risk. (World Health Organization, 2022).

In low and middle-income regions, particularly in Africa, prevalence rates are considerably higher. A recent systematic review and meta-analysis reported pooled PTSD prevalence estimates among trauma-exposed children in Africa ranging from 30% to 40%, particularly in conflict-affected areas (Ng *et al.*, 2024), another study reported a prevalence rate of 36% with the most affected children being those who were 14 years and had experienced family deaths due to traumatic event (Tamir *et al.* 2024). In Africa the elevated rates are often attributed to prolonged exposure to violence, poverty, displacement, and limited access to mental health services (Meyer *et al.*, 2022).

Similarly, studies conducted in humanitarian and post-conflict settings have consistently demonstrated disproportionately high levels of PTSD among children compared to global averages (Charlson *et al.*, 2019).

In Morocco, Khalid *et al.* (2021) reported a prevalence of PTSD at 19.3% among children of age 12 to 17 years. Moreover, the factors independently associated with PTSD were being a girl, being in middle school, sleep interrupted, guilt, difficulties of memory and difficulties of concentration. In Ethiopia, Tamir *et al.* (2025), found a pooled prevalence estimate for PTSD among children and adolescents to be 25% with key risk factors being older age, female gender, low social support, feelings of entrapment, and experiencing bereavement. The figures were a bit lower than the prevalence rates reported for Africa.

Studies in neighboring countries such as Uganda and Tanzania have reported high PTSD prevalence among children exposed to war, displacement, and family-level adversities (Meyer *et al.*, 2022; Klasen *et al.*, 2019). In northern Uganda, for instance, children affected by armed conflict have shown PTSD prevalence rates exceeding 30%, highlighting the long-term psychological consequences of conflict exposure (Klasen *et al.*, 2019). In Tanzania high rates of mental issues were increased by corporal punishment and maltreatment which are common among orphans and vulnerable children in institutional care setting (Mkinga *et al.*, 2025).

In Kenya, research among children living in informal settlements in Nairobi has demonstrated elevated PTSD symptomatology linked to chronic exposure to violence and poverty (Osborn *et al.*, 2020). For example, Mugambi (2020) found a prevalence of 17.0% PTSD among adolescents from informal settlements of Nairobi. Female respondents had a significantly higher score as compared to male respondents.

Epidemiological studies indicate that while exposure to trauma is relatively common in childhood, the development of PTSD varies depending on multiple contextual and individual factors. Overall, the literature suggests a gradient in PTSD prevalence, with lower rates observed in general populations and markedly higher rates in high-risk and trauma-exposed groups. This highlights the importance of contextual factors in shaping mental health outcomes in children.

2. Problem Statement

Post-Traumatic Stress Disorder (PTSD) is a significant mental health condition that can develop in children following exposure to traumatic events, with potential long-term effects on emotional, cognitive, and social functioning. Globally, PTSD affects a considerable proportion of trauma-exposed children; however, evidence suggests that the burden is substantially higher in low- and middle-income countries, particularly in sub-Saharan Africa (Charlson *et al.*, 2019; Morina *et al.*, 2018). In Kenya, children are frequently exposed to multiple forms of trauma, including domestic violence, community violence, road traffic accidents, and socioeconomic adversity, all of which increase vulnerability to PTSD (Kumar *et al.*, 2021).

Despite this elevated risk, the true magnitude and

determinants of PTSD among children in Kenya remain inadequately understood. Existing studies have largely focused on specific high-risk groups, such as children affected by political violence or those residing in informal settlements (Harder *et al.*, 2020). While these studies provide important insights, they limit the generalizability of findings to the broader pediatric population. Moreover, many studies in the Kenyan context have examined general mental health outcomes or adverse childhood experiences without specifically focusing on PTSD as a distinct clinical condition.

In addition, there is limited research exploring the interaction of individual, familial, and environmental factors influencing PTSD among Kenyan children. Factors such as parental mental health, social support systems, and socioeconomic conditions are known to play critical roles, yet their combined effects within the Kenyan sociocultural context remain under studied. The majority of cross-sectional study designs further limits understanding of the progression and persistence of PTSD symptoms over time.

Furthermore, gaps exist in knowledge regarding access to and utilization of mental health services for children with PTSD in Kenya. The country faces significant challenges, including a shortage of trained mental health professionals and limited integration of mental health services into primary healthcare, which may hinder early identification and effective management of PTSD among children.

Consequently, the lack of comprehensive, context-specific data on the prevalence and associated factors of PTSD in the pediatric population in Kenya presents a critical gap in the literature. Addressing this gap is essential for informing targeted interventions, guiding policy development, and improving mental health outcomes for children. Therefore, this review seeks to determine the prevalence and associated factors of PTSD among children in Africa, with the aim of generating evidence to support contextually relevant prevention and intervention strategies.

3. The Prevalence of PTSD in Children

The prevalence of PTSD is influenced by several factors discussed below.

A. Trauma-Related Factors Associated with PTSD

The characteristics of the traumatic event are among the strongest predictors of PTSD development in children. Research consistently demonstrates that the severity, chronicity, and type of trauma significantly influence PTSD risk (Lewis *et al.*, 2019). Intentional traumas, such as physical or sexual abuse and interpersonal violence, are associated with higher rates of PTSD compared to unintentional events such as accidents or natural disasters (Alisic *et al.*, 2014; Morina *et al.*, 2018).

Furthermore, direct exposure to trauma has been shown to result in higher PTSD symptom severity compared to indirect exposure, although witnessing traumatic events can also have profound psychological effects (Sachser *et al.*, 2017). Repeated or prolonged exposure to traumatic events further compounds the risk, particularly in settings characterized by ongoing

conflict or instability (Charlson *et al.*, 2019).

The nature and context of trauma exposure in East Africa play a critical role in shaping PTSD outcomes among children. Interpersonal violence, including physical and sexual abuse, is a major contributor to PTSD in the region (Kumar *et al.*, 2021). In Kenya, studies have shown that children exposed to domestic violence or community crime are at significantly increased risk of developing PTSD symptoms (Osborn *et al.*, 2020).

Additionally, exposure to multiple and chronic stressors - such as poverty, food insecurity, and unsafe living environments - compounds the psychological impact of discrete traumatic events (Harder *et al.*, 2020). Unlike single-incident trauma, cumulative adversity is particularly relevant in East African settings, where children often face ongoing stress rather than isolated traumatic experiences. Natural disasters, including droughts and floods, also contribute to trauma exposure particularly in rural and arid areas of Kenya. These environmental stressors often intersect with economic hardship, further increasing vulnerability to PTSD.

B. Individual (Child-Level) Factors

Individual characteristics of the child also play a critical role in the development of PTSD. Age has been identified as a significant factor, with older children and adolescents generally exhibiting higher PTSD prevalence compared to younger children (Meyer *et al.*, 2022). This may be due to increased cognitive capacity to process traumatic experiences and heightened awareness of threat.

Gender differences are also well documented, with female children consistently demonstrating higher rates of PTSD than males (Lewis *et al.*, 2019). Biological, psychological, and sociocultural factors have been proposed to explain this difference. Additionally, prior exposure to trauma and pre-existing mental health conditions significantly increase vulnerability to PTSD (Morina *et al.*, 2018). Children with a history of anxiety, depression, or previous trauma are more likely to develop PTSD following subsequent exposure.

Cultural norms and gender roles may further shape how trauma is experienced and expressed, particularly in relation to stigma and reporting of symptoms. Previous exposure to trauma is especially relevant in this context, as many children experience repeated adversities over time. Studies in Kenya have shown that cumulative trauma exposure is strongly associated with increased PTSD severity (Kumar *et al.*, 2021). Furthermore, limited access to early mental health screening and intervention services in many parts of East Africa contributes to the persistence and exacerbation of PTSD symptoms among affected children.

C. Family and Social Factors

Family environment and social support systems are critical determinants of PTSD outcomes in pediatric populations. Parental mental health, particularly parental PTSD or depression, has been shown to strongly influence children's psychological responses to trauma. Children whose caregivers display psychological distress are more likely to develop PTSD symptoms as the caregivers are less able to provide emotional

support to children (Meyer et al., 2022). In contexts of poverty and instability, caregivers themselves are often exposed to trauma, creating intergenerational cycles of psychological distress.

Conversely, strong social support from family, peers, and the community serves as a protective factor against PTSD (Charlson et al., 2019). Supportive caregiving environments can buffer the impact of trauma and promote resilience. In Kenya, extended family systems and community networks can serve as protective factors by providing emotional and practical support to children (Osborn et al., 2020). However, urbanization and migration have weakened some of these traditional support systems, particularly in informal settlements. School environments also play an important role. Access to supportive educational settings has been associated with reduced PTSD symptoms, while school dropout and lack of access to education increase vulnerability (Harder et al., 2020). Family instability, including parental loss, separation, or displacement, further exacerbates PTSD risk (Ng et al., 2024). These stressors often co-occur with traumatic experiences, particularly in conflict and low-resource settings.

D. Environmental and Contextual Factors

The likelihood of PTSD in children is also significantly influenced by broader environmental factors. The risk of developing PTSD is greatly increased by exposure to armed conflict, community violence, and forced displacement (Charlson et al., 2019). Additional difficulties that children in low-resource environments encounter include restricted access to mental health treatments, which may delay diagnosis and treatment.

Socioeconomic disadvantage is another important determinant, as poverty is associated with increased exposure to traumatic events and reduced access to protective resources (Meyer et al., 2022). Cultural factors may also influence how PTSD symptoms are expressed and interpreted, highlighting the need for context-specific research and interventions. Cultural beliefs and stigma surrounding mental health also influence help-seeking behavior. In some communities, psychological symptoms may be misunderstood or attributed to non-medical causes, further delaying appropriate intervention.

4. Summary of Literature

The reviewed literature demonstrates that PTSD in children is a multifaceted condition influenced by an interplay of trauma-related, individual, familial, and environmental factors. While global prevalence rates remain relatively moderate, significantly higher rates are observed in trauma-exposed and high-risk populations, particularly in African and conflict-affected settings. Key associated factors include trauma severity, female gender, older age, prior trauma exposure, parental psychopathology, and low social support. Understanding these factors is essential for developing targeted prevention and intervention strategies aimed at reducing the burden of PTSD among children and adolescents.

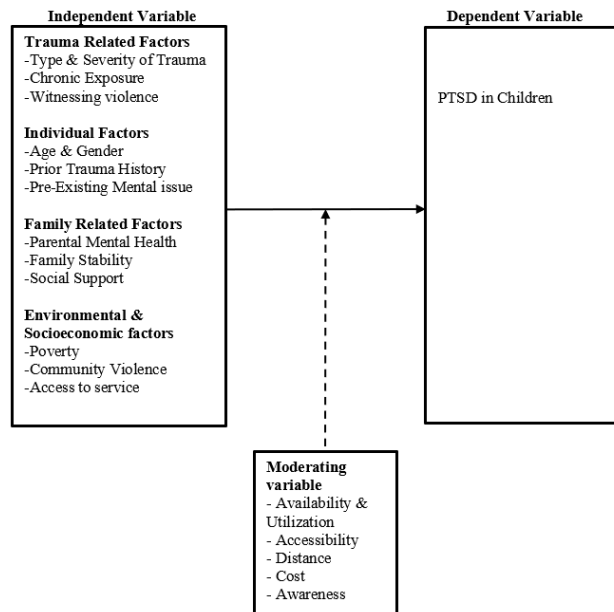


Fig. 1. Conceptual framework

References

- [1] Alisic, E., Zalta, A. K., Van Wesel, F., Larsen, S. E., Hafstad, G. S., Hassanpour, K., & Smid, G. E., "Rates of post-traumatic stress disorder in trauma-exposed children and adolescents: Meta-analysis," *British Journal of Psychiatry*, vol. 204, no. 5, pp. 335–340, 2014.
- [2] American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders*, 5th ed. Washington, DC, USA: American Psychiatric Publishing, 2013.
- [3] American Psychological Association, *Clinical Practice Guideline for the Treatment of Posttraumatic Stress Disorder*. Washington, DC, USA: APA, 2020.
- [4] G. A. Bonanno, S. Pat-Hamilton, and C. Burton, "Resilience to loss and potential trauma," *Annual Review of Psychology*, vol. 71, pp. 237–261, 2020.
- [5] F. Charlson, M. van Ommeren, A. Flaxman, J. Cornett, H. Whiteford, and S. Saxena, "New WHO prevalence estimates of mental disorders in conflict settings," *The Lancet*, vol. 394, no. 10194, pp. 240–248, 2019.
- [6] V. S. Harder, V. Mutiso, L. Khasakhala, H. Burke, and D. Ndeti, "Multiple traumas, postelection violence, and posttraumatic stress among impoverished Kenyan youth," *Journal of Traumatic Stress*, vol. 33, no. 3, pp. 346–356, 2020.
- [7] G. S. Hafstad and E.-M. Augusti, "PTSD in children and adolescents: A review of epidemiology and treatment," *Current Opinion in Psychology*, vol. 41, pp. 9–14, 2021.
- [8] R. C. Kessler, S. Aguilar-Gaxiola, J. Alonso, C. Benjet, E. J. Bromet, G. Cardoso, and K. C. Koenen, "Trauma and PTSD in the WHO World Mental Health Surveys," *Psychological Medicine*, vol. 47, no. 13, pp. 2260–2274, 2017.
- [9] A. Khalid et al., "Prevalence of posttraumatic stress disorder among adolescents in school and its impact on their well-being: A cross-sectional study," *Pan African Medical Journal*, vol. 39, no. 54, 2021.
- [10] F. Klasen, G. Oettingen, J. Daniels, M. Post, C. Hoyer, and H. Adam, "Posttraumatic resilience in former Ugandan child soldiers," *Journal of Child Psychology and Psychiatry*, vol. 60, no. 6, pp. 657–666, 2019.
- [11] K. C. Koenen, A. Ratanatharathorn, L. Ng, K. A. McLaughlin, E. J. Bromet, D. J. Stein, and R. C. Kessler, "Posttraumatic stress disorder in the World Mental Health Surveys," *Psychological Medicine*, vol. 47, no. 13, pp. 2260–2274, 2017.
- [12] M. Kumar, K. Y. Huang, C. Othieno, D. Wamalwa, B. Madeghe, J. Osok, and M. McKay, "Adverse childhood experiences and mental health outcomes among children in Kenya," *Child Abuse & Neglect*, vol. 111, p. 104805, 2021.
- [13] S. J. Lewis, L. Arseneault, A. Caspi, H. L. Fisher, T. Matthews, T. E. Moffitt, and A. Danese, "The epidemiology of trauma and PTSD in children," *Journal of Child Psychology and Psychiatry*, vol. 60, no. 3, pp. 247–256, 2019.

- [14] R. Levin and R. Liu, "Post-traumatic stress disorder in a national sample of preadolescent children: Prevalence, correlates, clinical sequelae, and treatment utilization," *Research Square*, rs.3.rs-3303568, 2023.
- [15] K. A. McLaughlin, K. C. Koenen, E. D. Hill, M. Petukhova, N. A. Sampson, A. M. Zaslavsky, and R. C. Kessler, "Trauma exposure and posttraumatic stress disorder in a national sample of adolescents," *Journal of the American Academy of Child & Adolescent Psychiatry*, vol. 52, no. 8, pp. 815–830, 2013.
- [16] S. Meyer, L. K. Murray, E. S. Puffer, and P. Bolton, "The impact of parental mental health on child PTSD outcomes in low-resource settings," *Child and Adolescent Mental Health*, vol. 27, no. 2, pp. 123–131, 2022.
- [17] G. Mkinga, A. Kirika, T. Hecker, and K. Hermenau, "Orphans and other vulnerable children in Tanzania care institutional: Experiences of maltreatment and mental health problems," *Science Direct*, vol. 5, p. 100155, 2025.
- [18] N. Morina, R. Koerssen, and T. V. Pollet, "Interventions for children and adolescents with PTSD: A meta-analysis," *Clinical Psychology Review*, vol. 63, pp. 30–45, 2018.
- [19] P. Mugambi, A. Munene, and M. Mogute, "Prevalence of suicidal behavior among adolescents with depressive disorders and posttraumatic stress in informal settlements of Nairobi, Kenya," *African Journal of Clinical Psychology*, vol. 3, no. 1, 2020.
- [20] L. C. Ng *et al.*, "Prevalence of post-traumatic stress disorder among children in Africa: A systematic review and meta-analysis," *BMC Psychiatry*, vol. 24, p. 112, 2024.
- [21] T. L. Osborn, K. E. Venturo-Conerly, A. R. Wasil, J. L. Schleider, and J. R. Weisz, "Depression and anxiety symptoms, social support, and demographic factors among Kenyan adolescents," *Journal of Affective Disorders*, vol. 274, pp. 651–657, 2020.
- [22] C. Sachser, L. Berliner, T. Holt, T. K. Jensen, N. Jungbluth, E. Risch, and L. Goldbeck, "International development and psychometric properties of the Child and Adolescent Trauma Screen (CATS)," *Journal of Affective Disorders*, vol. 210, pp. 189–195, 2017.
- [23] T. T. Tamir, B. Tekeba, E. G. Mekonen *et al.*, "Shadows of trauma: An umbrella review of the prevalence and risk factors of post-traumatic stress disorder in children and adolescents," *Child and Adolescent Psychiatry and Mental Health*, vol. 19, p. 48, 2025.
- [24] T. T. Tamir, B. Yimer, S. A. Gezahgn *et al.*, "Prevalence and associated factors of post-traumatic stress disorder in pediatric populations in Africa: A systematic review and meta-analysis," *BMC Psychiatry*, vol. 24, p. 643, 2024.
- [25] World Health Organization, *International Classification of Diseases for Mortality and Morbidity Statistics (11th Revision)*. Geneva, Switzerland: WHO, 2018.
- [26] World Health Organization Regional Office for Europe, *Child and Youth Mental Health in the WHO European Region*. Copenhagen, Denmark: WHO Regional Office for Europe, 2025.
- [27] World Health Organization, *Mental Health Atlas 2020*. Geneva, Switzerland: WHO, 2021.
- [28] World Health Organization, *World Mental Health Report: Transforming Mental Health for All*. Geneva, Switzerland: WHO, 2022.