

# Physiological and mental health effects of the ongoing civil war among North, Northwestern and Central Ethiopia. A systematic review

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## Introduction

A civil war broke out in Ethiopia in November 2020, initiated by an attack from the Tigray region on the Ethiopian military, prompting a government counterattack. The resulting humanitarian crisis led to mass displacement, loss of life, and food shortages, impacting over 5.1 million people.<sup>1</sup> The destruction of infrastructure hindered healthcare services, raising concerns about disease spread and limited medical access. Given the lack of research, this writeup aims to review literature on mental and physiological effects among individuals from conflict-affected areas in North and Central Ethiopia, intending to provide useful insights for healthcare professionals and policymakers addressing health challenges arising from the ongoing civil war.

## Results

The review of 13 articles encompassed community-based cross-sectional studies, mixed research explanatory study, and comparison study. Among these, findings indicated a high prevalence of post-traumatic stress disorder (PTSD) in various populations affected by the ongoing conflict in Ethiopia. For instance, one study reported a 59.8% PTSD prevalence among residents of Maikaidra in November 2020, while another study identified PTSD, insomnia, and psychosis in 46 households, predominantly reported by females.<sup>4</sup> Additional studies revealed concerning health impacts, such as inadequate vaccination rates among children under 2 years, a high prevalence of PTSD in adolescent girls who experienced traumatic events, and a significant prevalence of bacteriologically confirmed pulmonary tuberculosis. Assessments of health care facilities indicated that over 96% of facilities in Tigray did not meet full functionality criteria due to conflict-related issues.

## Methods

Primary resources were collected from PubMed through the Carroll College library database in september 2023. A total of 26 initial PubMed results were narrowed down, 13 articles were selected, meeting the criteria for inclusion in the systematic review based on relevance and alignment with the research question.

## Discussion

The results highlight a significant prevalence of mental health disorders, particularly PTSD and perceived stress, among individuals in these conflict zones. The impact on healthcare services is evident, with low vaccination rates and increased rates TB and drug-resistant TB. Urgent targeted interventions are emphasized to alleviate the suffering of affected populations and enhance overall well-being. Recognizing the consistent detrimental mental and physical effects of the ongoing civil war in North and Northwest Ethiopia, this research aids physicians and healthcare providers in understanding the epidemiology of prevalent health conditions and guides accurate diagnosis and patient-tailored treatment. Overall, urgent interventions are imperative to address the heightened prevalence of Physical and mental health disorders in conflict-affected populations from North and Northwest Ethiopia.

## Acknowledgements

I would like to thank Dr. Gerald Schafer for providing consistent guidance on my review.

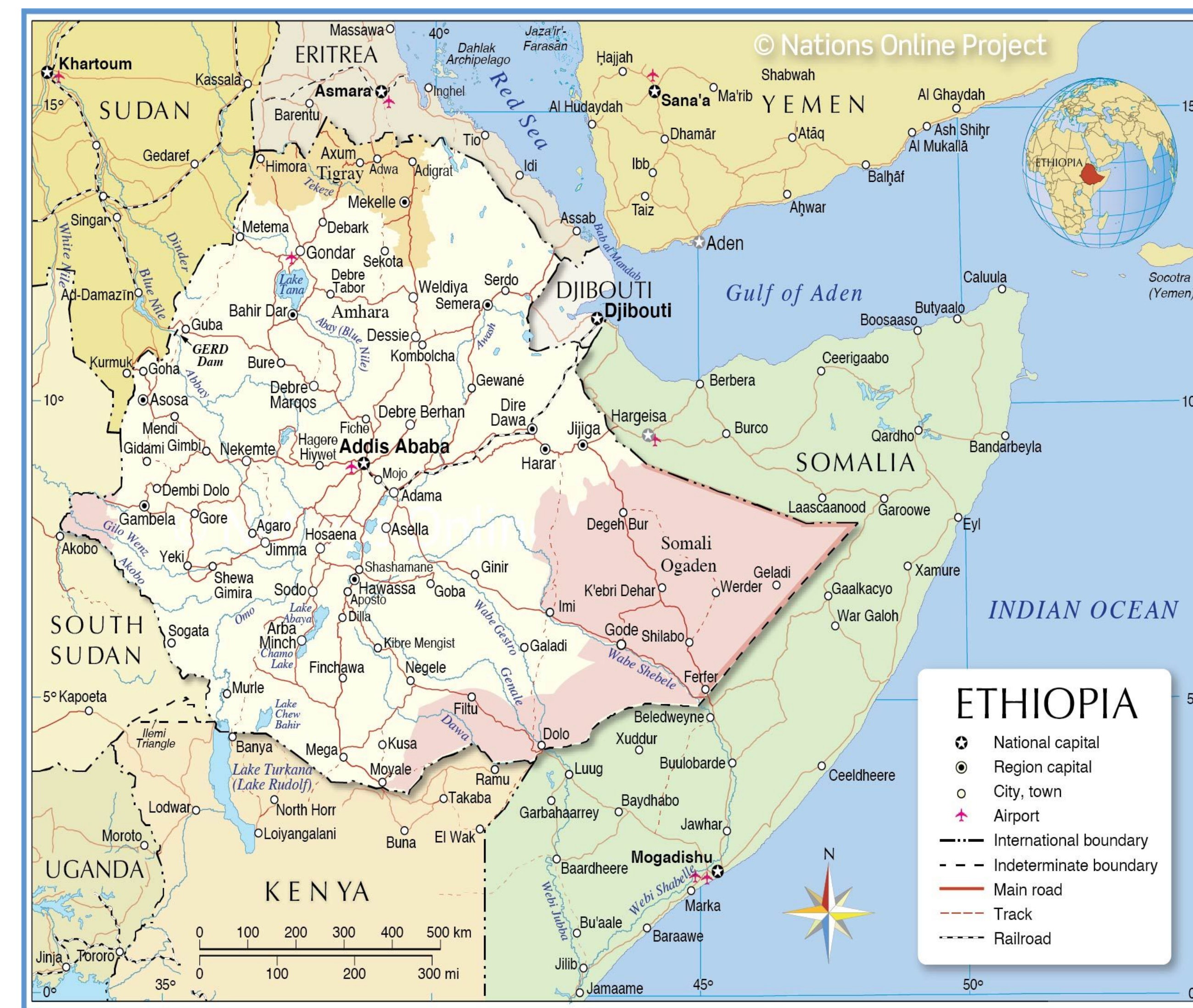


Figure 1. Map of Ethiopia and its regional states<sup>14</sup>

## Bibliography

1. Habib J. Ethiopia set a world record for displacements in a single year: 5.1 million in 2021. NPR. <https://www.npr.org/sections/goatsandsoda/2022/05/28/1100469734/ethiopia-set-a-world-record-for-displacements-in-a-single-year-5-1-million-in-20>. Published May 28, 2022. Accessed November 15, 2023.
2. Ali D, Azale T, Wondie M, Tadesse J. About Six in Ten Survivors of the November 2020 Maikadra Massacre Suffer from Posttraumatic Stress Disorder, Northwest Ethiopia. *Psychol Res Behav Manag*. 2022;15:251-260. doi:10.2147/PRBM.S338823
3. Mezen MK, Lemlem GA, Biru YB, Yimer AM. Association of War With Vaccination Dropout Among Children Younger Than 2 Years in the North Wollo Zone, Ethiopia. *JAMA Network Open*. 2023;6(2):e2255098. doi:10.1001/jamanetworkopen.2022.55098
4. Teshome AA, Abebe EC, Mengstie MA, et al. Post-traumatic stress disorder and associated factors among adult war survivors in Northwest Ethiopia: Community-based, cross-sectional study. *Frontiers in Psychiatry*. 2023;14. Accessed August 30, 2023. <https://www.frontiersin.org/articles/10.3389/fpsy.2023.1083138>
5. Wolde A, Dessalegn N. Posttraumatic Stress Disorder, Suicidal Behavior, Substance Use, and Sexual Victimization Among Adolescent Girls Aged 10-19 Years Living Under Ethnic-Based Civil War in Ethiopia. *NDT*. 2022;Volume 18:2239-2250. doi:10.2147/NDT.S381461
6. Meaza A, Diriba G, Girma M, et al. Molecular typing and drug sensitivity profiles of *M. Tuberculosis* isolated from refugees residing in Ethiopia. *J Clin Tuberc Other Mycobact Dis*. 2023;31:100371. doi:10.1016/j.jctube.2023.100371
7. Meaza A, Yenew B, Amare M, et al. Prevalence of tuberculosis and associated factors among presumptive TB refugees residing in refugee camps in Ethiopia. *BMC Infectious Diseases*. 2023;23(1):498. doi:10.1186/s12879-023-08469-5
8. Tadesse M, Tessema SD, Mihretie A, et al. Perceived stress and its associated factors among people living in post-war Districts of Northern Ethiopia: A cross-sectional study. *PLOS ONE*. 2022;17(12):e0279571. doi:10.1371/journal.pone.0279571
9. Makango B, Alemu ZA, Solomon T, et al. Prevalence and factors associated with post-traumatic stress disorder among internally displaced people in camps at Debre Berhan, Amhara Region, Ethiopia: a cross-sectional study. *BMC Psychiatry*. 2023;23(1):81. doi:10.1186/s12888-023-04570-w
10. Yigzaw N, Hailu T, Melesse M, et al. Comprehensive mental health and psychosocial support for war survivors at Chenna Kebele, Dabat woreda, North Gondar, Ethiopia. *BMC Psychiatry*. 2023;23(1):172. doi:10.1186/s12888-023-04653-8
11. Gebregziabher M, Amdeselassie F, Esayas R, et al. Geographical distribution of the health crisis of war in the Tigray region of Ethiopia. *BMJ Glob Health*. 2022;7(4):e008475. doi:10.1136/bmjgh-2022-008475
12. Dadi AF. The mental health consequences of war in northern Ethiopia: why we should be concerned. *The Lancet Psychiatry*. 2022;9(3):194-195. doi:10.1016/S2215-0366(22)00013-X
13. Murthy RS, Lakshminarayana R. Mental health consequences of war: a brief review of research findings. *World Psychiatry*. Published online 2006.
14. Nations Online. "Ethiopia Political Map." Nations Online. <https://www.nationsonline.org/oneworld/map/ethiopia-political-map.htm>. Accessed Dec 8, 2023