THE EUROPEAN SOCIETY OF MEDICINE
Medical Research Archives, Volume 14 Issue 2

RESEARCH ARTICLE

"Whenever I remember I shed tears and can't speak": A thematic analysis of trauma experiences and resiliency amongst displaced women fleeing the Sudan war

Jess F. Petz[1], Kali Coles[2], Josephine Chandiru Drama[3], Heather Tasker[4], Sabine Lee[6*] & Susan A. Bartels[5]

[1]Department of Emergency Medicine, Queen's University, Kingston, Ontario, Canada
[2]Department of Emergency Medicine, Queen's University, Kingston, Ontario, Canada
[3]Global Voices Organization, Juba, South Sudan
[4]Department of Political Science and Law, Justice and Society Program, Dalhousie University, Halifax, Canada
[5]Departments of Emergency Medicine and Public Health Sciences, Kingston Health Sciences Centre, Queen's University, Kingston, Ontario, Canada
[6]Department of History, University of Birmingham, Birmingham, UK

*s.lee@bham.ac.uk

PUBLISHED
28 February 2026

CITATION
Petz, JF., Coles, K., et al., 2026. "Whenever I remember I shed tears and can't speak": A thematic analysis of trauma experiences and resiliency amongst displaced women fleeing the Sudan war. Medical Research Archives, [online] 14(2).

COPYRIGHT
© 2026 European Society of Medicine. This is an open- access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

ISSN
2375-1924

ABSTRACT

Background: The ongoing war in Sudan has resulted in the world's largest humanitarian crisis to date, and the widespread violence and displacement has resulted in poor mental health outcomes. This study explores the mental health impact of violence and displacement on women and girls fleeing the conflict in Sudan to South Sudan.

Methods: A cross sectional, mixed methods study was conducted in South Sudanese settlement sites in July 2024. The study gathered data on women's and girls' experiences of migration across the border from Sudan to South Sudan at Aweil North, using a sensemaking approach which captured micronarratives from participants aged 13+. Qualitative data were screened manually for inclusion, and narratives related to mental health and resilience were analyzed thematically.

Results: A total of 327 narratives were included in the study. Main themes included experiences of psychological trauma, impact of trauma, life at settlement centres and resilience. Our study found high levels of traumatic experiences amongst study participants, including sexual violence, death or killing of a family member, torture, and abduction, with a wide range of mental health impacts. The lack of support and services at settlement centres appeared to compound these concerns. Despite adversity many participants demonstrated resilience, indicating the potential for post-traumatic growth.

Conclusions: Our study found strong evidence of the mental health impact of the ongoing war and insufficient aid in South Sudanese settlement centres amongst women and girls. As resilient behaviours were found amongst study participants, interventions which harness resiliency may help foster post-traumatic growth in this population. Finally, as both mental health research and humanitarian response in this area are often overlooked, there is a clear need for coordinated advocacy efforts to increase mental health support and services in response to this ongoing conflict.

Introduction

The ongoing war between the Rapid Support Forces (RSF) and the Sudanese Armed Forces (SAF) has turned into one of the world's largest humanitarian crises to date[1-2]. Since 2023, the SAF and RSF have been fighting for political position and access to resources, however, civilians have borne the brunt of the violence and have been specifically targeted by the RSF[1,3-5]. Although the RSF functioned as the official paramilitary arm of the president of Sudan, it was formed from Janjaweed militias, who were previously accused of enacting genocide against Black civilians in the Darfur region of Sudan in the early 2000's[1,6]. In present day, since April 2023, the RSF has deliberately targeted non-Arab civilians, through forced displacement, massacres, widespread looting and sexual violence, resulting in the deaths of an estimated 150,000 people[5,7]. The RSF has been accused of leading a campaign to systematically eliminate ethnic Masalit communities in the Darfur region, drawing parallels to historic genocidal acts committed by the Janjaweed[4]. Additionally, there is evidence of genocidal acts committed by the RSF in Khartoum and Gezira state, and in 2023 the UN Human Rights Council accused the RSF of committing war crimes[3,8]. More recent attacks by the RSF in El-Fasher in November 2025 add to this evidence[7,9].

This conflict has resulted in the world's current largest number of conflict-related internally displaced people (IDPs), with around 9 million IDPs[10-11]. Around half of Sudan's population, 48% of which are children, are facing catastrophic levels of hunger, while millions of children have been deprived of access to education, potentially resulting in long-term socioeconomic impacts[12]. Additionally, in conflicted areas in Sudan around 80% of hospitals are non-functional, and those that are open face staffing and supply shortages[13]. Throughout the conflict, healthcare facilities and staff have increasingly become targets of violence, causing many staff to flee or facilities to close. Mental health services in Sudan have historically been clustered in urban centres, including Khartoum, Omdurman and Kassala, leaving those in rural areas with poor access and since the outbreak of war, centralized services have become nearly inaccessible[14-15]. Furthermore, ongoing economic instability has impacted on the affordability of treatment for many patients, funding for mental health services has rapidly declined, and security risks have limited organizational operations, leaving millions without care[15].

In addition to the millions of IDPs, the ongoing conflict has resulted in over 4 million people fleeing to nearby countries, including 1.2 million who have crossed the border to South Sudan[10]. As an already fragile host state, the influx of returnees and refugees has exacerbated a depleted healthcare and economic system. Nationally, South Sudan has only one specialized inpatient mental health service that is available at the Juba Teaching Hospital in the capital city[16]. Two other health centres located in Wau and Malakal provide outpatient care, however, in many regions of South Sudan those with mental health issues have been placed in prisons due to lack of available services[16-17]. Community perceptions around mental illness may also impact health seeking behaviours, as there is a high level of community stigma, especially in rural areas of South Sudan[18].

The Sudanese conflict has resulted in poor mental health outcomes for IDPs and refugees with some estimates suggesting between 36.6% - 58.8% of the population is experiencing post-traumatic-stress disorder (PTSD)[19-21]. Other impacts include increases in depression, anxiety, insomnia, and emotional regulation difficulties[20-22]. These mental health concerns are compounded by a lack of accessible and responsive mental health services in Sudan and South Sudan, financial constraints, and community stigma[18,23-24].

SETTLEMENT AND TRANSIT SITES IN SOUTH SUDAN

Roughly 1.2 million people have crossed the border from Sudan to South Sudan since the war began in 2023[13]. Around 80% of those fleeing the conflict have crossed the border through a single town in Upper Nile State, arriving in Renk county, South Sudan[25]. 'While settlement and transit sites in this area benefit from an NGO operated mobile clinic, the nearest health facility is a 2-hour drive away. Additionally, accessibility to this facility worsens during the rainy season, as the treacherous road makes the 2-hour trek nearly impossible, demonstrating the insufficiencies in current aid delivery[26]. Renk's aid shortages, despite being one of the most established settlement sites, suggest

that less developed or informal sites are likely to experience fewer services or poorer access to care.

Since 2024, fighting in the neighbouring Kordofan region has shifted migration patterns, leading to another major border crossing in Aweil County, South Sudan[10]. While those fleeing the conflict have been settling in Aweil County since the conflict began, 2024 led to a major increase in migration across this border point. Since their establishment in 2023, settlement sites in this region suffer from overcrowding, inadequate shelter, lack of water, sanitation and hygiene (WASH) facilities, food insecurity, poor healthcare access, and lack of educational and livelihood opportunities[27]. This report also highlighted disparities between Sudanese refugees, who are staying in established transit centres, compared to South Sudanese returnees, who are largely living under trees, without food or WASH access.

In 2023, an NGO operated mobile clinic existed in Aweil, which provided referrals for specialist care, some mental health support and health education[27]. Another organization was working closely with community health workers to provide psychosocial care at Wedweil primary healthcare unit, Gok Machar health centre, and Jaac health unit[28]. However, these clinics are out of reach for many at the Aweil North settlement site. Given the potential impact of trauma on refugees and returnees, coupled with the compounding effects of forced displacement, which can exacerbate existing psychosocial conditions and precipitate new mental health challenges, those at settlement and transit sites in South Sudan may be facing a high burden of mental health challenges[29]. Furthermore, previous studies have suggested that the daily stressors of living in settlement sites are as impactful on mental health as previous war exposure, meaning those fleeing the Sudan war are at further risk of experiencing poor mental health outcomes as a result of the challenges faced in South Sudanese settlement sites[30-32].

OUR STUDY

Due to ongoing conflict and historical under-investment, there is a paucity of research focusing on mental health in Sudan and South Sudan[14,17]. Additionally, both countries lack robust mental health care services, which have historically been insufficient, and have become less accessible due to the ongoing conflict. This study seeks to address these critical gaps by exploring the mental health needs, resiliency, and service access among women and girls who have fled the war in Sudan, and who are now residing in settlement sites in Aweil North, South Sudan. By centering community voices, this research aims to inform contextually relevant interventions and bring attention to the growing mental health burden experienced by women and girls in South Sudan's settlement centres. Our research questions asked: what forms of trauma did women and girls experience during their displacement journeys, and how did these impact their psychosocial well-being? What were the psychosocial impacts of daily stressors at settlement sites? In what ways did women and girls demonstrate resilience?

Methods

STUDY SETTING, IMPLEMENTATION AND DATA COLLECTION

Data for this paper originates from a mixed-methods study that explored women's and girls' experiences of migration from Sudan to South Sudan because of the current conflict[33]. This cross-sectional study, which used a 'sensemaking' approach, was conducted over a 2-week period from July 16th - July 31st, 2024. The sensemaking approach prompted participants to record or type brief narratives, called micronarratives, in response to one of four open ended prompts (Table 1)[34-35]. While its focus was to better understand gendered migration experiences and sexual and gender-based violence (SBGV) concerns faced by displaced women and girls, participants could share any experience related to migration.

Table 1: Micronarrative Prompts

• Share an example of the biggest opportunity or greatest threat experienced by a women or girl who has migrated across the Sudan/South Sudan border
• Think of a woman or girl who has migrated across the Sudan/ South Sudan border. Tell a story about how this migration helped or harmed her
• Provide a story that illustrates the biggest fear or dream of a woman or girl who has migrated across the Sudan/ South Sudan border
• Provide a story that illustrates how being a woman or girl most increases or decreases the risks faced during migration across the Sudan/South Sudan border

Participants used tablets equipped with the Spryng.io sensemaking application to record their narratives and afterwards interpreted their own stories by answering a series of questions. b. Additional multiple-choice questions captured key sociodemographic information about study participants. The brevity of the sensemaking approach allows for a large sample of self-interpreted data which provides a broad overview on a topic of interest (in this case, women/girls' migration experiences).

Data was collected at a formal border crossing in Aweil North, South Sudan, and nearby informal border crossings. STEWARDWOMEN, a South Sudanese civil society organization which focuses on combatting gender-based violence, completed the data collection with a team of 3 male and 3 female English and Arabic-speaking researchers. Researchers conducted interviews in private settings to ensure confidentiality, using the Spryng.io app on tablets. Most micronarratives were shared in Arabic. Some were transcribed and translated into English by the researcher at the point of data collection, while others were audio recorded in Arabic and later transcribed and translated using an artificial intelligence tool, Sonix.ai. All micronarratives transcribed/translated with Sonix.ai were later verified by humans to ensure accuracy and cultural nuance. Researchers from STEWARDWOMEN underwent a 3-day training prior to data collection which covered ethics, sensemaking methodology, participant referral, reporting adverse events, psychological first aid and self-care. Further details of the original parent study have been published elsewhere[33].

PARTICIPANT SAMPLING AND RECRUITMENT

A convenience sample of participants was recruited from public spaces, including markets, aid distribution centres and reception centres. Those who self-identified as Sudanese refugees and South Sudanese returnees, female or male, aged 13 and older, were able to participate. Additional effort was made to ensure recruitment of equity-deserving groups such as people with disabilities, being a visible minority, and LGBTQI+ individuals. Although the focus of the study was on women and girls, males were included as engaging men is critical when addressing SBGV issues, and in our team's previous sensemaking studies men and boys were often more candid in their micronarratives. Participants could choose to share more than one experience and therefore the total number of sensemaking surveys exceeds the number of unique participants.

SENSE MAKER SURVEY DATA

STEWARDWOMEN and academic team members from the University of Birmingham, Dalhousie University, and Queen's University collaboratively developed the survey. Originally written in English, the survey was professionally translated into Arabic, and then back-translated to ensure accuracy. Discrepancies were resolved by consensus with a third individual, who was bilingual in Arabic and English. A pilot test was conducted with STEWARDWOMEN team members to ensure relevance and clarity. Although the study focused on women's and girls' experiences of migration, we recognize that men, boys, and equity-deserving groups can also face challenges during migration, however this was outside of the scope of our study.

DATA SELECTION AND ANALYSIS

From the original study, which included 695 micronarratives, 327 were included in this analysis. JP and KC screened the data manually to assess eligibility for inclusion. Narratives which expressed a psychosocial impact from migration, those which included experiences of trauma, and narratives which highlighted resilience were included for

analysis. The definition for trauma experiences originated from the American Psychiatric Association, however it was adapted to our context, and included any narratives that mentioned firsthand (or a direct family member) experiencing kidnapping, physical assault, death, or sexual violence. Any narratives that did not include enough detail or were shared by someone who did not witness the event or experience it first-hand, or who did not have a direct family member involved, were excluded. Key definitions for experiences of trauma can be found in Table 2. In line with Mukumbang and Adebiyi[36], the concept of resilience has been conceptualized as mediating processes that were implemented in response to adversity, resulting in better-than-expected outcomes, such as survival. For the purposes of this paper, resilience is not limited to optimism and growth, but encompasses the capacity to endure and persist, seek out opportunities, and make difficult decisions under conditions of extreme violence and constraint. The American Psychological Association definition for resilience is included in Table 2 to provide additional information on how mediating processes function.

Table 2: Key Definitions

Term	Definition
Trauma Experiences	Exposure to actual or threatened death, serious injury or sexual violence either by experiencing it firsthand, witnessing it or learning a close family member experienced the traumatic event[37].
Resilience	The process of successfully adapting to challenging life experiences, using emotional, mental and behavioural flexibility to adjust to internal and external demands[38].

Data was analyzed using Braun & Clarke's[39] 6-phase process of thematic analysis. Researchers JP and KC co-developed a codebook with input from team member JD, using a combination of inductive and deductive methods[40]. Codes were applied systematically to all data, using NVIVO 14 and 10% of the data was co-coded by two researchers to ensure analytical rigor (JP and KC). Data was then grouped into themes and sub-themes, and reviewed with the wider research team, including JD and SAB[39]. Themes were conceptualized as specific patterns of meaning or relationships between data points and were then triangulated using relevant academic literature[40].

ETHICAL CONSIDERATIONS

Informed consent was obtained from all participants, by selecting a checkbox on the tablet before starting the survey. Individuals under the age of 18 provided assent and a parent or guardian provided informed consent. All data was anonymous, as the survey did not gather any identifying information. The sensemaking survey took 12-15 minutes to complete, and participants were offered up to $5 in light refreshments and reimbursement of any transportation costs. For any participants needing support services, STEWARDWOMEN arranged referrals to local services at the Aweil border. Additionally, referral cards for the National SGBV Hotline were offered to each participant. The study protocol was approved by the Queen's University General Research Ethics Board (#6040906) and by the South Sudan Ministry of Health Research Ethics Board (RERB-P NO:18/2024).

POSITIONALITY STATEMENTS

JP, KC, HT, and SAB are white, female, settler scholars based in Canada. SL is white European scholar based in the UK. They recognize that their training and professional positioning within Western academic institutions shape their worldview and may limit their interpretation of participants lived experiences. JP has spent time working in Sub Saharan Africa, Latin America and the Middle East as a humanitarian aid worker and recognizes that these experiences influenced their worldview and may impact how they analyzed these study results. KC grew up in rural Northern Ontario, which has shaped their understanding of health systems and

inequities and influenced their interpretation of study results. JD is a South Sudanese female, scholar and humanitarian aid worker whose lived experiences, and professional history, give her a unique understanding of the challenges faced by South Sudanese women and girls, and contributes to her interpretation of study results.

Results

In total, 327 narratives were included in the final analysis. Most study participants were women (90%), and the majority (54%) were between the ages of 19-45 years old. Around two-thirds of narratives (67%) were first person, while 31% were about a family member or someone else the respondent knew. Within the first-person narratives, many women (53%) identified as widows, or as being separated/ divorced, indicating high levels of single-parent households. Additionally, 74% of the women included in the sample had 3 or more children. Almost all (97%) of the micronarratives were classified as negative or strongly negative. Demographic data were also collected about the woman or girl described in the micronarrative. The majority (70%) of women / girls in the micronarratives were between the ages of 19-45, while 18% were under the age of 18.

Table 3: Sociodemographic characteristics (n=327)

Gender of Narrator		**Number of Children for Narrator (1st person narratives only)**	
Woman	293	0	13
Man	31	1-2	43
Non-binary	3	3+	163
Age of Narrator (1st person narratives only)		**Age of Woman/ Girl in Narrative**	
Under 18	12	Under 18	58
19-30 years	101	19-30 years	135
31-45 years	71	31-45 years	95
45+	25	45+	29
Marital Status Narrator (1st person narratives only)		**Tone of Story**	
Married	91	Strongly Negative	259
Widowed	73	Negative	57
Divorced/ Separated	50	Neutral	8
Single	4	Positive	1

ADVERSITY AND EXPERIENCES OF PSYCHOLOGICAL TRAUMA

Out of the included 327 narratives, 220 discussed experiences of trauma or explicitly discussed the impacts of trauma. Overall, 106 discussed abduction, 99 narratives discussed family members dying from preventable causes or being killed, 73 discussed rape, and 68 discussed physical assault or torture. Of the 220 micronarratives that discussed trauma events, 100 narratives mentioned more than one event. These experiences often occurred in Sudan, prompting displacement, with secondary events often occurring during migration.

Participants shared overtly violent experiences that appeared targeted or systematic in nature, often based on ethnicity, and including acts of sexual violence, which prompted displacement out of reported fear.

> Participant ID 70922 - Female, 31-45, widowed, 3+ kids: When the conflict started in Sudan, I was with my husband and other family members in Denerg. There were unknown people who came at night to my home. . . they tied [up] my husband, poured petrol on him, and set him on fire. This prompted my journey to South Sudan because of fear.

> Participant ID 70957 - Female, 19-30 years, married, 3+ kids: I was in Khartoum when the conflict started. Armed soldiers of Arabs came to

> our house . . . they grabbed me, and I was taken behind a building where ten soldiers raped [me]. Nobody came to rescue me because my mom was already shot dead.

Some participants discussed firsthand accounts of multiple trauma experiences at the hands of the RSF. Two female participants specifically discussed the militia's cycle of abducting, raping and killing girls during displacement.

> Participant ID 71124 - Female, under 18, married, no kids: We came from Western Darfur . . . we were attacked by militia who killed both my mother and father there. Thereafter, all girls were detained and taken . . . This is where I was raped by 3 men. After a few days, we were released, and more girls were brought in. This is their cycle.

> Participant ID 71142 - Female, 19-30 years, widowed, 1-2 kids: I started my journey from Khartoum, where on the way, my husband was killed, and I was abducted by [ ] for 3 weeks and I was pregnant by them. Where I was taken, there were many abducted girls. 2 of them died in my presence due to over-raping and inability to move. They were then shot dead.

Many narratives discussed attempted and actual kidnappings, rape, and a wide range of physical assaults. Sometimes physical assaults were a result of resisting the RSF. However, some narratives explored how those without economic means were beaten or tortured because they were unable to pay the RSF money.

> Participant ID 71194 - Female, more than 45 years: They wanted to rape my two daughters, and I was fighting for them not to take them anywhere, I was cut with a knife on my face while they were telling me to shut up . . . but I went through the pain instead of watching my daughters being raped.

> Participant ID 70909 - Female, 19-30 years: On the way [to South Sudan] I was caned by the rebels for not having money with me. They didn't respect me even though I was pregnant. Those women who had money were not caned but they gave money.

Two participants shared experiences where nearly all the people in their convoy were targeted by the RSF and were killed or raped. This hints at potential systemic violence and is suggestive of how the RSF may be targeting civilians fleeing Sudan.

> Participant ID 71214 - Female: Our car was ambushed by rebels; they got the men out and shot them one by one. Us ladies were taken out and they asked for our money, . . . other ladies were raped after that, but I was left because I was pregnant.

> Participant ID 71207 - Female, 19-30 years: From Sudan towards the border, I met military men who told us to get out of the bus. I was told to get out with the girls, their fathers were asking why they were taking them and they tried to resist, so [the military men] decided to shoot the girls to death in front of us and their parents.

IMPACT

Some narratives included explicit discussions of the impact of trauma, displacement and the war on study participants. Narratives expressed a wide range of emotional outcomes. One narrative explored how a father and husband sent his family to South Sudan for the perceived safety, which resulted in an abduction and ongoing distress for his wife.

> Participant ID 70885 -Male: I decided to send my family to South Sudan ahead of me but unfortunately, on the way my last born, who is a girl, was abducted. My wife was seriously beaten for defending her young daughter from abduction. As I talk to you, the mother is traumatized.

Another study participant shared a firsthand narrative of violence she witnessed, resulting in the

death of family members and leading to mental health concerns.

> Participant ID 71106 - Female, widowed, 3+ kids: a bomb dropped by a helicopter killed my husband and my son. I decided to return to South Sudan bare handed. This experience made me almost lose my mind. On the way, I walked barefoot, with dirty clothes and uncombed hair. Even when the militia got me, they knew I was a mad woman.

Some participants broke down in tears while sharing their experiences of displacement, demonstrating ongoing sadness and anguish. Other participants indicated ongoing mental health concerns such as an inability to sleep or feelings of emotional pain or anxiety when recounting their experiences.

> Participant ID 71217 - Female, 19-30 years, married, 3+ kids: we started our journey to Sudan, it was safe until we met the Arabs. They got us out of the car and assembled all women and raped each of us. The ones that refused were beaten badly and even cut with knives just to hurt them because of saying no to the rape; it is so painful and psychologically torturing.

> Participant ID 70526 - Female, no other info: My daughter was raped on the way, and my husband's brother was killed. . . [They] attacked us on the way, killing my husband's brother and the wife, their corpses were not brought to [the] South and buried left under the tree . . . whenever I remember I shed tears and can't speak." (participant was crying).

> Participant ID 71218: Female, no other info: We started our journey . . . they grabbed my daughter and took her to the forest and they started raping her, so my husband decided to go and rescue her, and he and my daughter didn't return from the forest, . . . I cannot sleep at night because I don't know if they are safe or dead."

> Participant ID 70925 - Female, 19-30, divorced/separated, 1-2 kids: What now pains me is I don't know where my husband is, my mom, brothers and sisters. I feel lonely and nobody helps me. When I think of my missing family members, I don't eat, no sleeping throughout the night. I am traumatized.

A number of narratives discussed discrimination that South Sudanese returnees felt while working in Sudan or while fleeing back to South Sudan. Many participants who discussed discrimination felt they were being targeted for being Black; some mentioned being told to 'go home' or being called racial slurs by Arab soldiers. One respondent explained the racist nature of the attacks by the RSF paramilitary forces. While others discussed intimidation tactics used by the soldiers and the perceived systemic nature of their attacks against Black South Sudanese.

> Participant ID 71098 - Female, no other info: These practices are racist. They are practicing racism against the people of South Sudan. They don't do this to the Arabs. Only to the Southerners, they take their belongings and oppress them. They don't do that to the Arabs.

> Participant ID 70955 - Female, widowed, 3+ kids: The Arab soldiers told us to go back home where we came from. One soldier said, "we will die with you here" If any of you want to escape to South Sudan, we are going to kill [you] on the road."

> Participant ID 70350 - Female, more than 45, married, 3+ kids: They took everything, some get beaten, some get robbed, some get kidnapped. They've beaten us all at this point. We're just trying to live and they won't let us do that, they've taken everything from us, they tell us

> "You'll never go to your country" . . . they beat us and left us messed up"

LIFE AT SETTLEMENT AND TRANSIT CENTRES

Several narratives discussed the squalid and abject living conditions participants were now experiencing at transit and settlement centres along the South Sudanese border. Participants noted poor housing, lack of food and little to no health services, including mental health care. Many participants' narratives expressed themes of helplessness or hopelessness.

> Participant ID 70311 - Male: Is this normal? What am I supposed to do, am I supposed to leave my kids to die? They already don't have a mother; I have no work for them to fall back on. What am I to do? . . . Everyone here is exhausted, here we have nothing.

> Participant ID 70319 - Female, 31-45 years, separated/divorced, 3+ kids: We are stranded, there is no solution whether in South Sudan or in the north. We have just surrendered our lives to God. This is what I have to say.

> Participant ID 70299 - Male: The organizers told us to come see them, but we found nothing with them . . . What do we do? Do we just sit and die? Or are we already dead? The families we raised, we struggled, it's enough, we can't even bury our own, one can't bury his own father.

> Participant ID 70940 - Female, 31-45 years, widowed, 3+ kids: What are we to do, we're just sitting here with nothing, just for what, for us to sit here with our hearts cold in our own country.

Some narratives explored how the experience of displacement and arriving at a settlement centre without appropriate or sufficient support systems compounded their concerns, leading to frustration and hopelessness.

> Participant ID 70344- Female, 31-45 years, married, 3+ kids: The day we came there were problems, we walked for 4 days. They took everything, . . .four days we didn't eat. Then we came here without food, with no money, just looking for food. They took all our things, were sitting here silently with no food; hunger is killing us, there's no jobs and they're bringing in nothing. We just sit in silence.

> Participant ID 70985- Female, more than 45, widowed, 3+ kids: I suffered not only here in South Sudan but also Sudan. Fear of segregation, sexual abuse and insults with hardship made me to return home. I heard and felt women being abused, young girls kidnapped as wives . . . but my greatest concern is the organizations at the border issuing cards and registering returnees for what reasons if they can't help us. No tents, we are left in the rain and hungry. Don't just interview me, help me.

RESILIENCE

Resilience presented itself in various ways. Participants in our study met with an array of adversities and trauma experiences, and they utilized various mediating processes to survive these circumstances. A common adversity mentioned by participants was being ambushed by the RSF during displacement, and having their vehicle and belongings taken away. As a result, many participants reported having to walk for days on end, often without food or water, to reach the border or to find transportation, demonstrating fortitude in thinking and adaptation to surroundings.

> Participant ID 70864 - Female, widowed, 3+ kids: We walked for nearly one month from Sudan to Kiir Adem border entry point in South Sudan. Sadly, on the way my 17 years old daughter was raped by the soldiers. Fortunately, I got she was released by the soldiers after 3 days rape. We then continued walking [on] the journey.

> Participant ID 71135 - Female, 19-30 years, widowed, 3+ kids: On our way to South Sudan, we entered

into [an] ambush, the militia entered the car, beating everyone. I tried to run from the car, [and] my 1-year old baby fell from the car and died. My husband was also killed there, and I ran with 3 children for 2 days until I reached Regabut and got transport to reach here.

Participant ID 71164 - Female, 31-45 years, widowed, 1-2 kids: We spent 7 days on the road without water or food; we relied on God. We ate the fruit of the tamarind tree to avoid dry mouth. On the eighth day, we found a man in the forest, someone driving a cart . . . and he picked us up and brought us here.

Despite experiencing significant adversity on their journey, participants managed to cross the border and reach relative safety in South Sudan. For many, this represented a better-than-expected outcome. For instance, one participant explained how unlikely it was to have made it through the journey without being harmed, and how they arrived empty-handed, but alive.

Participant ID 71046: Again, reaching here safely needs prayers as the probability [of] reaching safely is just half. We were ambushed and all my properties were looted and beaten badly too. I didn’t reach here with any item except our lives.

In the settlement centres, many participants demonstrated resilience in their flexibility to adapt to new living situations and to make the best of their reality and the new adversities they were facing. Many families discussed foraging for food or collecting wood or other items to sell at the souq. Some families even took in other’s children or the children of relatives who had died during displacement. These adaptive actions helped families feed and shelter their loved ones so they could survive in the settlement centres.

Participant ID 70007 - Female, 19-30 years, separated, 3+ kids: The situation we’re in is just exhaustion. No one has anything to eat. I go into the forest to find some vegetables; I pick the vegetables and after I bring them a meal. But they’re not comfortable, we’re struggling. We thank God we’re finally in our country; we just want the rest of our family here too.

Participant ID 70866 - Female, 31-45 years, widowed, 1-2 kids: I fetch and sell water in some of the small restaurants at the settlement to get something to feed me and the daughter.

Participant ID 71055 - Male: My daughter was coming here this year in February but unfortunately got killed on the way before reaching here while pregnant. I am now taking care of her 6 children; one passed on last week due to hunger.

Many participants, despite their treacherous journeys across Sudan and the border, remained grateful and thankful to be back in their homeland. Even participants who witnessed family members being killed or abducted shared feelings of gratitude for making it across the border. Additionally, some participants shared that even though there are no resources and no food they are happier to be home than in Sudan.

Participant ID 71202 - Female: On the way our car was stopped by [the] military, . . .as they were trying to take my brothers and abduct them, my mum was trying to stop them, so they shot her dead. As my younger sister was following, they also shot her dead and abducted my brothers. . .I thank God though that I am in my mother land

Participant ID 70973 - Female,19-30 years, widowed, 3+ kids: When I got here there was nothing, we were just sitting here with no food and no peace. Thank God that I got here, the problems came at night, they rob you at night. Here it is quiet. They killed my husband, I came here alone, that’s from the problems of

© 2026 European Society of Medicine

> the north. That's why I came here, there's no food, but there's no problems either.

Some participants expressed hope for the future, and a couple expressed a sense of relief of being back in South Sudan and away from the war. Despite the ongoing adversities faced by study participants, including hunger, lack of shelter, and the impact of trauma, many demonstrated flexibility in their thinking and resolve by holding out hope for the future.

> Participant ID 70320 - Female: Here is somehow safe because there is no war. During the time of war, our life was balancing between life and death. I am relieved, I can laugh here compared to there.

> Participant ID 71177 - Male: I see this as a big opportunity because many people have lost their lives and property and I have lost all I have built in Sudan. But it is an opportunity for me to start again, with nothing, I still have hope.

> Participant ID 71025: I don't have any food but at least I'm comfortable, there's no Arab to come beat me. Even if I have no peace, there's no Arab to beat me. All the other things will come in time, that's why I'm staying here in the south.

Discussion

This study explored experiences of trauma and adversity, targeted violence, and resilience and their impact on individuals displaced to South Sudan during the current Sudanese conflict. It discussed themes of resilience and explored how the compounding nature of multiple trauma events, coupled with poor living conditions at settlement sites may be impacting psychosocial wellbeing. Our results add to existing literature exploring the impact of trauma and role of resilience in conflict affected settings, while addressing key gaps in empirical evidence from the current Sudan conflict related to trauma and its impact. Figure 1 provides a visualization of our data including the interactions between psychological trauma and resilience. It also includes potential mental health impacts, which will be explored further in the discussion, and how resilience can lead to better-than-expected outcomes.

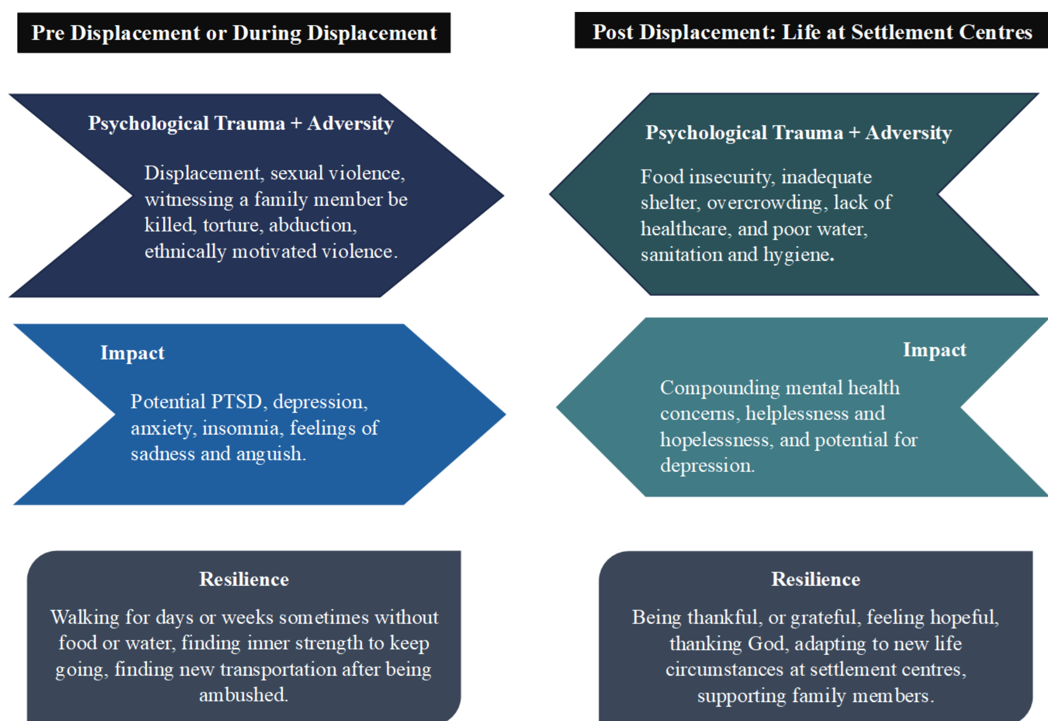

Figure 1: Conceptual Framework

WAR RELATED TRAUMA AND PSYCHOSOCIAL WELLBEING

A major result from the study was the high level of psychological trauma and adversity experienced by study participants. Participants shared a wide range of trauma including first-hand experiences of sexual assault, kidnapping and torture, or experiences of having a family member kidnapped, tortured, sexually assaulted, killed or dying prematurely. In addition to these experiences, all participants had been displaced due to war, and many had witnessed firsthand conflict related violence such as bombings, or shootings. Studies have found comparatively high rates of PTSD amongst Sudanese affected by the current conflict (36.6% - 57%/58.8%)[19-21], when compared to estimates for conflict-affected populations generally (15-37%)[41-42]. Additionally, Hussein et al.[19] found that females were more likely to experience PTSD than males, and considering most of our sample is female, this may suggest increased risk for PTSD symptoms amongst our study population. Additionally, a systematic review conducted by Mesa-Vieira et al.,[43] found that migrants who are exposed to war and conflict had higher risk for poor mental health outcomes such as PTSD and depression. Overall, our findings appear consistent with the literature, suggesting that high rates of PTSD and depression may be present amongst those displaced by the ongoing conflict[19,21,43].

As of October 31st, 2025, over 560,000 individuals were recorded entering border points across South Sudan from Sudan, with 50% being female, and a combined 78% being females and children[44]. As studies have suggested that mental health impacts amongst these populations may be greater, exploring this evidence is crucial[21-22,45]. A study by Eltayeb & Badri[45], explored the impact of war related violence on Sudanese youth. This study found high rates of PTSD and poor mental health (60%), along with experiences of violence, including physical beatings (47%), torture (17%) and sexual violence (2%). Heltne et al.,[22] conducted a study amongst Sudanese and South Sudanese refugees, and found severe psychosocial consequences for children's development, behaviour and emotional well-being as a result of war related trauma exposure, and pervasive hunger. Finally, Mohammed Bilal et al.,[21] found high rates of severe depression (62%), severe anxiety (52.9%), PTSD (58.8%) and sub-threshold insomnia (57.5%) amongst Sudanese citizens affected by the current conflict. They also found that females were more likely to experience depressive symptoms, and younger populations were more likely to experience PTSD. Given these demographics, the compounding trauma experiences of many participants from our study, and the previously discussed evidence, transit and settlement centres in South Sudan are facing high levels of psychosocial concerns including PTSD, depression, anxiety, insomnia, and challenges in emotional well-being amongst females, youth and children.

TARGETED VIOLENCE ON CIVILIANS

In addition to experiencing traumatic conflict related events, many study participants noted that the interpersonal violence they experienced appeared to be targeted and ethnically motivated by the RSF. Many participants noted they were being targeted specifically for being Black or non-Arab and outwardly discussed the racist and discriminatory nature of the attacks. Furthermore, Human Rights Watch and other organizations have accused the RSF of committing genocidal acts and war crimes[3,8]. Literature has asserted that experiencing genocidal acts can negatively impact mental health leading to symptoms of depression, anxiety, trauma, PTSD, suicidality, and increased interpersonal conflict[46-48]. In addition to mental health concerns, a study conducted in Darfur found elevated levels of both domestic violence and community level conflict post genocide amongst survivors[47]. Meierhenrich[49] discusses how genocide may also cause cultural, or collective, trauma that goes beyond individual suffering. Cultural trauma alters collective identity through socially mediated processes of meaning-making, focusing on how survivors of genocide interpret events and conceptualize their futures. As our data did not specifically gather information around meaning making in relation to experiences of displacement, our ability to assert cultural trauma is limited. However, with many participants sharing experiences of racially motivated attacks, and their association with poor mental health outcomes, it is possible that populations at transit centres may be experiencing multiple compounding mental health crises, including cultural trauma.

STRESSORS IN SETTLEMENT CENTRES

Although many participants experienced a vast amount of trauma in Sudan and during

displacement, including targeted, ethnically motivated violence, several participants shared narratives which discussed ongoing daily life stressors at settlement and transit sites. This is consistent with earlier research that has identified post-displacement war stressors as reliable predictors of distress in populations at similar levels to prior war exposure, meaning the stress faced by participants at settlement centres may be as impactful as their experience of trauma during displacement[30-32]. Concerns cited repeatedly by study participants included a lack of housing, food insecurity, lack of access to resources or medical care, and feelings of loneliness and hopelessness. This, too, is consistent with previous studies that have shown poverty, hunger, the stress of displacement, overcrowding, lack of privacy and isolation, and lack of medical care to be factors contributing to PTSD and/or poor psychosocial and emotional outcomes[19,22,50]. Furthermore, overcrowding in transit centres often leaves individuals with mental health concerns with little to no privacy for managing symptoms (i.e. flashbacks, panic attacks, etc.), or for relaxation or self-care[19]. Therefore, conditions in settlement and transit centres are creating an enabling environment for new mental health concerns such as depression, loneliness and hopelessness, while compounding existing war-related trauma experiences. The paucity of available mental health services, lack of adequate basic needs, and non-existent privacy may be further exacerbating all these mental health concerns.

RESILIENCE

Participants used several mediating processes, such as flexible thinking and adaptive behaviours in response to the traumatic experiences they encountered. Examples included, participants reporting walking for days or weeks during their displacement to reach safety, foraging for food or collecting items to sell at settlement sites, or taking in orphaned children. Additionally, once participants arrived at settlement sites many expressed hope for the future, shared a thankfulness for being safe, and expressed strong religious beliefs, all suggestive of a resilient mindset. A systematic review conducted by Lane et al[51]. found that among forcibly displaced populations, those with increased resilience experienced lower mental health difficulties. Specifically, resilience was found to have a negative association with symptoms of PTSD, anxiety, depression and psychological distress. Another systematic review conducted by Siriwardhana et al[52]., found similar results, suggesting resilience is associated with better mental health in displaced populations. Additionally, Fayaz[53] found that the use of religious coping was associated with post-traumatic growth amongst populations exposed to armed conflict. Russo-Netzer[54], found optimism to be a strong predictor of psychological resilience amongst those who experienced collective trauma. Kimhi et al[55]., found similar results, with hope being a strong predictor of community resilience amongst those impacted by the war in Ukraine. Our results are similar, with many participants expressing gratitude or thankfulness to God for arriving in South Sudan. Some micronarratives also shared thankfulness for family, especially when family members arrived safely, or for having family support in the settlement sites. The emergence of ongoing religious belief, hope and optimism amongst study participants, may suggest psychological resilience at play. Although resilience is associated with more favorable psychosocial outcomes among displaced populations, this association reflects individuals' adaptive responses to adversity rather than the magnitude of their trauma or health burdens. Accordingly, interventions that strengthen resilience processes may contribute to improved psychosocial functioning within our target population[51].

POTENTIAL INTERVENTIONS

Lancaster & Gaede[56] conducted a study amongst internally displaced Iraqis to test the GROW intervention in IDP camps. This intervention is premised on the concept of post-traumatic growth and aims to develop specific, evidence-based characteristics that can promote resilience and foster overall well-being[57-58]. The intervention focuses on cultivating religiousness, thankfulness, kindness, hope and courage[59-61]. GROW relies on non-professional providers, can be implemented in a variety of contexts, and was found to significantly reduce PTSD symptoms in participants[56]. Many participants in our study exhibited resilience through expressions of hope, religiousness and thankfulness despite the atrocities they experienced, suggesting that post-traumatic growth within this population is possible.

A review by Thabet et al[62]., highlighted the importance of shifting from clinical settings to community-based approaches to promote resilience amongst displaced children in low- and middle-income countries (LMIC's). They also highlighted the need for further research in specific resilience-generating interventions, with a priority for mental health research in LMIC's targeting disadvantaged populations. Tol et al[63-64]., discussed the importance of culturally appropriate counselling services, community-based support and the integration of traditional healers into interventions.

Based on the previously discussed evidence, a two-pronged approach for supporting mental health concerns for those in South Sudanese settlement sites may be beneficial. The first prong could address ongoing stressors in the settlement sites, including lack of housing, food, employment and overcrowding, to reduce the likelihood of enabling new mental health concerns or exacerbating existing ones. The second prong could provide basic mental health and psychosocial services (MHPSS), incorporating the cultivation of resiliency through targeted interventions (such as GROW). While a general lack of access to MHPSS services appears to be the largest problem, ensuring implementation is conducted at community level, incorporating traditional healers and community leaders, could help ensure interventions are culturally responsive. This approach would allow for actors to respond to the imminent needs of the population, while potentially fostering post-traumatic growth and aiding in the reduction of mental health concerns. Finally, as mental health interventions are often overlooked in humanitarian response, we aim to advocate for an increased allocation of resources and targeted interventions to address mental health concerns amongst those in South Sudanese settlement centres.

LIMITATIONS

The results of this study must be understood within its limitations, which have been more fully elaborated in the parent study[33]. Firstly, the use of a convenience sample may have limited the generalizability and representativeness of the study results. Despite attempts to include historically marginalized individuals, some groups may remain underrepresented, potentially limiting conclusions about their experiences. Authors (JP, KC, HT, SAB and SL) acknowledge that their positionality as white researchers based in the Global North may have limited their ability to interpret the study data with cultural nuance. However, collaboration with a South Sudanese organization, STEWARDWOMEN, may have helped to mitigate this risk. Finally, the original study aimed to capture women and girls' experiences of migration from Sudan to South Sudan and did not specifically capture information about psychosocial concerns. Therefore, it is likely that the full scope of mental health concerns and resiliencies are not captured within this data.

Despite these limitations, this study has many strengths. Firstly, due to the nature of 'sensemaking' data, the study had a large sample size for a qualitative analysis, meaning researchers were able to gather big picture information regarding the ongoing mental health concerns in settlement centres. Furthermore, as mental health was not specifically asked about during the survey, a wide range of related concerns were captured, and social desirability bias was likely decreased. Finally, due to a paucity of comprehensive mental health studies in Sudan and South Sudan, this paper seeks to fill a literature gap.

Conclusion

Our study highlighted the high level of exposure to trauma experienced by participants during their displacement from Sudan to South Sudan. It discussed the mental health impact of ongoing stressors in settlement sites and demonstrated a wide range of resilient behaviours and thinking amongst study participants, indicating the possibility for post-traumatic growth. By centering community voices, it brought attention to the increasing mental health burden experienced by those in South Sudan's settlement centres. Our study also highlighted the historical lack of investment in mental healthcare, with the current conflict complicating access to essential services. We aimed to contribute to the literature by providing community-based accounts of mental health concerns, with contextually appropriate interventions, as both mental health research and humanitarian response in this area are often overlooked. Finally, our data has brought forth strong evidence of the mental health impact of the ongoing war and insufficient aid in settlement

centres, highlighting the need for coordinated advocacy efforts for increased mental health support and services.

Conflict of Interest Statement:

The authors have no conflicts of interest to declare.

Funding Statement:

This research was funded by the Cross-Border Conflict Evidence, Policy and Trends (XCEPT) research programme, which brings together world-leading experts and local researchers to examine conflict-affected borderlands, how conflicts connect across borders, and the drivers of violent and peaceful behaviour. Funded by UK International Development from the UK government, XCEPT offers actionable research to inform policies and programmes that support peace; however, the views expressed do not necessarily reflect the UK government's official policies.

Acknowledgements:

We offer our appreciation to the study participants for sharing their experiences and for their trust in the research team. We deeply appreciate the support provided by STEWARDWOMEN, as their expertise was crucial for enabling data collection and ensuring a successful outcome for this study. We extend our gratitude to Dr. Maureen Murphy for her insight into logistical concerns before data collection, and a heartfelt thanks to Ms. Riya Williams for her assistance with the ethics review at the Juba ethics board. Finally, this research was conducted, in part, thanks to funding from the Canada Research Chairs Program (CRC-2024-00176, S. Bartels).

© 2026 European Society of Medicine

References:

1. D'Agoôt M. Beyond state capture: the case of the Rapid Support Forces (RSF) in Sudan. *Small Wars & Insurgencies*. 2025;36(4):1-29. https://doi.org/10.1080/09592318.2025.2464435

2. Savage R. Sudan in "world's largest humanitarian crisis" after two years of civil war. The Guardian. Published April 15, 2025. https://www.theguardian.com/world/2025/apr/15/sudan-in-worlds-largest-humanitarian-crisis-after-two-years-of-civil-war

3. de Waal A. Lineages of Genocide in Sudan. *Journal of Genocide Research*. Published online April 29, 2025:1-19. https://doi.org/10.1080/14623528.2025.2495792

4. Gallopin JB. "The Massalit Will Not Come Home." *Human Rights Watch*. Published online May 9, 2024. https://www.hrw.org/report/2024/05/09/massalit-will-not-come-home/ethnic-cleansing-and-crimes-against-humanity-el

5. Konozy HE. Sudan's devastating war: unravelling its multifaceted impact. *Medicine, Conflict and Survival*. 2023;40(1):1-5. https://doi.org/10.1080/13623699.2023.2299736

6. Konozy EHE, Baleela RMH. The Rapid Support Forces (RSF): the militia that ruined Sudanese lives. *Medicine, Conflict and Survival*. 2025;41(3):1-9. https://doi.org/10.1080/13623699.2025.2524890

7. New Satellite Evidence Shows Mass Graves Following Paramilitary Massacre in Sudanese City. FDD. Published November 6, 2025. https://www.fdd.org/analysis/2025/11/06/new-satellite-evidence-shows-mass-graves-following-paramilitary-massacre-in-sudanese-city/

8. Ardianti P, Fidela MR, Setiawan ZZ, Suratiningsih D. Motives of extremism movements of Sudan rapid support forces in the Sudan conflict 2023. *Tirtayasa Journal of International Law*. 2024;3(1):85-102.

9. Raymond NA, Howarth C. *HUMAN SECURITY EMERGENCY Day Two of RSF Control: Mass Killings Continue in El-Fasher.*; 2025. https://files-profile.medicine.yale.edu/documents/b9c14991-6b22-492e-9e16-f903d25d9b49

10. Sudan Crisis: Displacement in Sudan and Mixed Cross-Border Movement Overview | Displacement Tracking Matrix. dtm.iom.int. Published 2025. https://dtm.iom.int/node/24896

11. Osman M. Sudan Conflict Fuels World's Largest Internal Displacement. Human Rights Watch. Published January 31, 2024. https://www.hrw.org/news/2024/01/31/sudan-conflict-fuels-worlds-largest-internal-displacement

12. Goldhagen J, Elkrail SE, Affan A. Responding to the humanitarian crisis in Sudan. *BMJ Paediatrics Open*. 2024;8(1):e002893. https://doi.org/10.1136/bmjpo-2024-002893

13. Two years of war in Sudan: An updated picture of the humanitarian impact (April 2025) - Sudan. ReliefWeb. Published April 15, 2025. https://reliefweb.int/report/sudan/two-years-war-sudan-updated-picture-humanitarian-impact-april-2025

14. Osman AHM, Bakhiet A, Elmusharaf S, Omer A, Abdelrahman A. Sudan's mental health service: challenges and future horizons. *BJPsych International*. 2019;17(1):17-19. https://doi.org/10.1192/bji.2019.19

15. World Health Organization. *Sudan Conflict and Refugee Crisis: Multi-Country External Situation Report N.2 Sudan Conflict and Refugee Crisis Multi-Country External Situation Report N. 2.*; 2024. Accessed January 13, 2026. https://cdn.who.int/media/docs/default-source/documents/emergencies/situation-reports/20240717_sudan-emergency-sitrep-2.pdf

16. Goldsmith A, Cockcroft-McKay C. Mental health in South Sudan: a case for community-based support. *Disasters*. 2019;43(3):534-554.

17. De Graaff A. Integrating mental health services into primary health care in South Sudan: a case study. HealthNet TPO/Dutch Consortium for Rehabilitation; 2015.

18. Ayazi T, Lien L, Eide A, Shadar EJS, Hauff E. Community attitudes and social distance towards the mentally ill in South Sudan: a survey from a post-conflict setting with no mental health services. *Soc Psychiatry Psychiatr Epidemiol*. 2014;49(5):771-780.

19. Hussein MF, Saleeb M, Tolba B, et al. Assessment of post-traumatic stress disorder and well-being among Sudanese during the ongoing war: a cross-sectional study. *BMC Psychol*. 2025; 13(1):181.

20. Khalil KA, Mohammed GTF, Ahmed ABM, et al. War-related trauma and posttraumatic stress disorder in refugees, displaced, and nondisplaced people during armed conflict in Sudan: a cross-sectional study. *Confl Health*. 2024;18(1):66.

© 2026 European Society of Medicine

21. Mohammed Bilal M, Elnour SMB, Elmahdi ZZ, Ahmed EMM. Mental health consequences among Sudanese due to the armed conflicts and civil unrest of 2023: a cross-sectional study. *Int J Soc Psychiatry*. 2024;70(3):563-573. doi:10.1177/00207640231221101

22. Heltne U, Dybdahl R, Sharif S, Breidlid A. Local adults' perceptions of adverse experiences and psychosocial consequences among refugee children in Sudan and South Sudan. *Child Youth Serv Rev*. 2025;108368.

23. Alfahal MS. Sudan's mental health landscape: evaluating mental health system and strategic opportunities in a conflict-affected nation. *EC Psychol Psychiatry*. 2025;14:01-09.

24. Elidressi S, Ahmedalgabri R, Ali R, Elhardlu H. Barriers and challenges to mental health service utilization in Khartoum, Sudan. *BJPsych Open*. 2025;11(S1):S5-S5.

25. REACH. Humanitarian situation overview: Aweil East and Northern Bahr el Ghazal. Published 2024. https://reliefweb.int/report/south-sudan/humanitarian-situation-overview-aweil-east-and-northern-bahr-el-ghazal-october-2024-aweil-east-northern-bahr-el-ghazal-south-sudan

26. Médecins Sans Frontières. Fleeing war, seeking hope: the struggle for survival in South Sudan's Renk County. ReliefWeb. Published 2025. https://reliefweb.int/report/south-sudan/fleeing-war-seeking-hope-struggle-survival-south-sudans-renk-county

27. Médecins Sans Frontières. South Sudan: a crisis within a crisis as people fleeing conflict in Sudan struggle for survival. Published 2023. https://www.doctorswithoutborders.ca/south-sudan-a-crisis-within-a-crisis-as-people-fleeing-conflict-in-sudan-struggle-for-survival/

28. HealthNet TPO. Sudan conflict: supporting South Sudanese returnees. https://healthnettpo.org/post/sudan-conflict-supporting-south-sudanese-returnees/

29. Bashir S, Eltayeb S, Badri A. Exploring trauma and resilience of urban South Sudanese refugees in Sudan. *Comp Migr Stud*. 2024;12(1):57.

30. Betancourt TS, Newnham EA, Layne CM, et al. Trauma history and psychopathology in war-affected refugee children referred for trauma-related mental health services in the United States. *J Trauma Stress*. 2012;25(6):682-690.

31. Ellis BH, MacDonald HZ, Lincoln AK, Cabral HJ. Mental health of Somali adolescent refugees: the role of trauma, stress, and perceived discrimination. *J Consult Clin Psychol*. 2008;76(2):184.

32. Miller KE, Rasmussen A. The mental health of civilians displaced by armed conflict: an ecological model of refugee distress. *Epidemiol Psychiatr Sci*. 2017;26(2):129-138.

33. Chandiru Drama J, Abdalla BE, Lindrio PI, et al. "This caused our journey": the relationship between sexual and gender-based violence and cross-border Sudan to South Sudan migration. *Confl Health*. 2025;19(1):58. doi:10.1186/s13031-025-00699-5

34. Urquhart C, Cheuk B, Lam L, Snowden D. Sense-making, sensemaking and sense making—a systematic review and meta-synthesis of literature in information science and education. *J Assoc Inf Sci Technol*. 2025;76(1):3-97.

35. Van der Merwe SE, Biggs R, Preiser R, et al. Making sense of complexity: using SenseMaker as a research tool. *Systems*. 2019;7(2):25.

36. Mukumbang FC, Adebiyi BO. Using resilience theory to understand and address migrant pandemic precarity among South African migrant populations. *Arch Public Health*. 2025;83(1):89. doi:10.1186/s13690-025-01573-9

37. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. 5th ed. American Psychiatric Association; 2013.

38. American Psychological Association. Resilience. https://www.apa.org/topics/resilience

39. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol*. 2006;3(2):77-101. doi:10.1191/1478088706qp063oa

40. Joffe H. Thematic analysis. In: Harper D, Thompson A, eds. *Qualitative Research Methods in Mental Health and Psychotherapy*. Wiley-Blackwell; 2012:203-223.

41. 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.

42. Kakaje A, Al Zohbi R, Aldeen OH, et al. Mental disorder and PTSD in Syria during wartime: a nationwide crisis. *BMC Psychiatry*. 2021;21(1):2.

43. Mesa-Vieira C, Haas AD, Buitrago-Garcia D, et al. Mental health of migrants with pre-migration exposure to armed conflict: a systematic review and meta-analysis. *Lancet Public Health*. 2022;7 (5):e469-e481.

44. UNHCR. South Sudan population overview of refugees and asylum-seekers. Published 2025.

45. Eltayeb S, Badri A. Exposure to violence and psychosocial trauma among Sudanese survivors. *J Aggress Confl Peace Res*. 2025;17(1):57-75. doi: 10.1108/JACPR-07-2024-0926

46. Kizilhan JI, Berger T, Sennhauser L, Wenzel T. The psychological impact of genocide on the Yazidis. *Front Psychol*. 2023;14:1074283. doi:10.33 89/fpsyg.2023.1074283

47. Meffert SM, Marmar CR. Darfur refugees in Cairo: mental health and interpersonal conflict in the aftermath of genocide. *J Interpers Violence*. 2009;24(11):1835-1848. doi:10.1177/0886260508325491

48. Rugema L, Mogren I, Ntaganira J, Krantz G. Traumatic episodes and mental health effects in young men and women in Rwanda, 17 years after the genocide. *BMJ Open*. 2015;5(6):e006778. doi:10.1136/bmjopen-2014-006778

49. Meierhenrich J. The trauma of genocide. *J Genocide Res*. 2007;9(4):549-573. doi:10.1080/14 623520701643327

50. Roberts B, Damundu EY, Lomoro O, Sondorp E. The influence of demographic characteristics, living conditions, and trauma exposure on the overall health of a conflict-affected population in Southern Sudan. *BMC Public Health*. 2010;10(1):518.

51. Lane R, Taylor H, Ellis F, Rushworth I, Chiu K. Resilience and its association with mental health among forcibly displaced populations: a systematic review and meta-analyses. *J Affect Disord*. 2025.

52. Siriwardhana C, Ali SS, Roberts B, Stewart R. A systematic review of resilience and mental health outcomes of conflict-driven adult forced migrants. *Confl Health*. 2014;8(1):13.

53. Fayaz I. Role of religion in posttraumatic growth among population exposed to armed conflict: a systematic review. *Ment Health Relig Cult*. 2023;26(5):455-469. doi:10.1080/13674676. 2023.2237909

54. Russo-Netzer P, Tarrasch R, Saar-Ashkenazy R, Guez J. Meaning and resilience in war-affected populations during crisis. *Front Psychiatry*. 2025; 16:1678205.

55. Kimhi S, Baran M, Baran T, et al. Prediction of societal and community resilience among Ukrainian and Polish populations during the Russian war against Ukraine. *Int J Disaster Risk Reduct*. 2023; 93:103792.

56. Lancaster SL, Gaede C. A test of a resilience-based intervention for mental health problems in Iraqi internally displaced person camps. *Anxiety Stress Coping*. 2020;33(6):698-705.

57. Peterson C, Park N, Pole N, D'Andrea W, Seligman MEP. Strengths of character and posttraumatic growth. *J Trauma Stress*. 2008;21(2):214-217.

58. Subandi MA, Achmad T, Kurniati H, Febri R. Spirituality, gratitude, hope and post-traumatic growth among survivors of the 2010 eruption of Mount Merapi. *Australas J Disaster Trauma Stud*. 2014;18(1):19.

59. Askay SW, Magyar-Russell G. Post-traumatic growth and spirituality in burn recovery. *Int Rev Psychiatry*. 2009;21(6):570-579.

60. Schweitzer R, Melville F, Steel Z, Lacherez P. Trauma, post-migration living difficulties, and social support as predictors of psychological adjustment in resettled Sudanese refugees. *Aust N Z J Psychiatry*. 2006;40(2):179-187.

61. Vernon LL, Dillon JM, Steiner AR. Proactive coping, gratitude, and posttraumatic stress disorder in college women. *Anxiety Stress Coping*. 2009;22(1):117-127.

62. Thabet A, Ghandi S, Barker EK, Rutherford G, Malekinejad M. Interventions to enhance psychological resilience in forcibly displaced children: a systematic review. *BMJ Glob Health*. 2023;8(2).

63. Tol WA, Barbui C, Galappatti A, et al. Mental health and psychosocial support in humanitarian settings: linking practice and research. *Lancet*. 2011;378(9802):1581-1591.

64. Tol WA, Stavrou V, Greene MC, et al. Sexual and gender-based violence in areas of armed conflict: a systematic review of mental health and psychosocial support interventions. *Confl Health*. 2013;7(1):16.