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## **Traumatic Events and Posttraumatic Stress Disorder in Individuals with Severe Mental Illness in a Non-Western Setting: Data from Rural Ethiopia**

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## Abstract

Traumatic events and ensuing stress are not widely studied in individuals with severe mental illness (SMI) despite their increased vulnerability to both. Far less is known about traumatic events and posttrauma reactions in people with SMI in low-resourced settings.

**Objective:** To address this gap in knowledge, our study focused on trauma and its effects for individuals with SMI and their caregivers in rural Ethiopia. Study aims were to identify events that were considered traumatic by stakeholders; characterize the mental health effects of such events; and discern events and posttrauma symptoms most relevant for SMI.

**Method:** Qualitative interviews were gathered from 48 participants in Ethiopia who included individuals with SMI, their caregivers, health care providers, and community and religious leaders.

**Results:** Based on a combined emic and etic approach, major traumatic events included those commonly experienced in rural Ethiopia (e.g., lost property, forced marriage) and endorsed by individuals with SMI (e.g., restraining or chaining, SMI illness in a low-resourced setting). In addition, traumatic events were identified consistent with Western medical criteria (e.g., physical assault, sexual assault). Posttrauma symptoms that were commonly reported included emotions like anger and sadness; thinking too much; crying; and somatic (e.g., burning sensation) and physiological (e.g., shortness of breath) symptoms. As for symptoms consistent with the *Diagnostic and Statistical Manual*, we found the presence of all four symptom clusters.

**Conclusions:** Overall, results point to the common occurrence of traumatic events and trauma-linked symptoms for individuals with SMI and their caregivers, including as a result of SMI.

**Keywords:** traumatic stress; posttrauma; severe mental illness; low- and middle-income countries; cultural context.

## **Traumatic Events and Posttraumatic Stress Disorder in Individuals with Severe Mental Illness in a Non-Western Setting: Data from Rural Ethiopia**

Life-threatening and potentially traumatic events (PTEs) are common experiences globally, with lifetime prevalence rates estimated to range up to 75% across the world's population (Benjet et al., 2016; Kessler et al., 2017). PTEs are associated with mental health disorders such as posttraumatic stress disorder (PTSD) and depressive and anxiety disorders as well as increased risk of severe mental illness (SMI; Kessler et al., 2017). Despite a high global prevalence of PTEs, traumatic events and associated mental health disorders like PTSD and SMI have been predominantly studied in high-income Western settings (i.e., Canada, United States, Western Europe, and Australia). The last two decades have seen a rise in research on PTEs and PTSD, in particular, in non-Western low-and middle-income countries (LMICs) that has found comparable rates with high-income Western settings (Atwoli et al., 2015; Koenen et al., 2017; Rasmussen et al., 2014). For example, in sub-Saharan Africa a recent review found that pooled prevalence rates for PTSD were 22% for individuals across 10 sub-Saharan African countries, with areas exposed to war or armed conflict reporting prevalence rates closer to 30% (Ng et al., 2020).

PTEs and PTSD are particularly common for individuals diagnosed with SMI, such as schizophrenia, bipolar disorder, and severe major depressive disorder. Estimates in high-income countries suggest that 25–50% of people with SMI also have PTSD (Bajor et al., 2013; Grubaugh et al., 2011; Lysaker & LaRocco, 2008). Furthermore, comorbid PTSD in individuals with SMI is associated with a slew of negative outcomes, including increased severity of SMI symptoms, worsened daily functioning, and impaired treatment outcomes and medication adherence as compared with those without PTSD (Lysaker et al., 2008; Mueser et al., 2010;

Schneeberger et al., 2014). In LMICs, SMI is the most common mental health concern for which people seek care (Kane et al., 2014), and studies in sub-Saharan Africa have found high levels of disability for individuals with SMI disorders (Adegbaaju et al., 2013; Esan & Esan, 2016).

Additionally, those living in LMICs have an especially high risk of exposure to PTEs resulting from armed conflicts, poverty, and few social safety networks (Porter & Haslam, 2005). Thus, individuals with SMI in LMIC settings may be particularly vulnerable to experiencing trauma and its disabling effects. For example, studies of trauma and PTSD in India have found high rates of PTEs, particularly interpersonal traumas, in individuals with SMI and ensuing negative effects from such traumatic experiences (Vallath et al., 2020; Gilmoor et al., 2020). Given the detrimental effects of PTSD on the prognosis of SMI, more research is needed on traumatic events and their effects on individuals with SMI in LMICs.

In Ethiopia a few studies have examined PTSD symptoms in high-risk populations or refugees, but none have done so for people with SMI. Unfortunately, as in other LMICs, those with SMI in Ethiopia face increased risk for additional PTEs such as stigma, human rights abuses, and physical and sexual violence (Alem, 2000; Girma et al., 2013; Teferra et al., 2011; Tsigebrhan et al., 2014). Although research projects have been launched to increase access to care for SMI (Fekadu et al., 2014; Fekadu et al., 2016; Lund et al., 2012), little research has been done to study co-occurring PTSD in this population in Ethiopia. Understanding the frequency and types of events that impact those with SMI in Ethiopia and the effects of trauma may be a needed first step toward future improvements in care.

### **Culture and Assessment of Mental Health Disorders**

Because current nosology and research are slanted toward Western clinical populations, efforts to accurately understand the effects of traumatic events for those with SMI are needed

outside Western settings, including in Ethiopia (Bass et al., 2007). However, the best methods for study are disputed with some questioning whether criteria from the Diagnostic and Statistical Manual (DSM), fifth edition (American Psychiatric Association [APA], 2013) and International Classification of Disease and Related Health Problems (ICD), 11th edition (World Health Organization [WHO], 2019), including for PTSD, are relevant in LMIC settings (Bracken et al., 2016; Summerfield, 1999, 2013; Whitley, 2015). Proponents of this view argue for an emic, meaning purely culture-bound, approach to understanding symptoms and syndromes, focused on cultural expressions of distress from local data (e.g., Weiss, 1997). In contrast, others argue for universal representations of disorders, or an etic transcultural approach (e.g., Jablensky et al., 1992). However, a centered strategy that integrates these two outlooks may be more precise and complete than either alone (Bass et al., 2019; Bolton et al., 2004; Wilk & Bolton, 2002). In this study, we will utilize a combined emic and etic approach by examining both local symptoms and syndromes of distress as well as the presence of symptoms consistent with the two latest version of DSM and ICD (APA, 2013; WHO, 2019) to characterize PTSD in an SMI population in rural Ethiopia.

### **Current Investigation**

The present study sought to identify and describe potentially traumatic and difficult life events and their psychological effects among individuals with SMI living in a rural district of Ethiopia using key informant interviews. This investigation is the initial phase of a larger study that assessed the need for trauma-focused treatment to later implement a brief trauma-focused intervention for patients diagnosed with SMI in this region. Understanding participants' lived experiences was a main focus of the initial stage. Stakeholders included patients with SMI, their caretakers, health care providers working with these patients, and community and religious

leaders involved in efforts to support patients with SMI. Study aims included: (a) identifying events that were considered traumatic by stakeholders, (b) characterizing local perspectives of the effects of such events (including symptoms and responses to events), and (c) determining the interactions between posttrauma symptoms and SMI based on local views. Interviews and qualitative analysis were focused on both the presence of traumatic events and symptoms as defined in the two latest versions of DSM and ICD (APA, 2013; WHO, 2019) as well as common culturally bound local events and symptoms. We also aimed to track effects of undue influence from interviewer questions by analyzing both spontaneous disclosures of traumatic events and symptoms and those elicited in response to specific questions about trauma and PTSD.

## **Method**

### **Participants**

Participants (N = 48) consisted of four stakeholder groups: patients with SMI (n = 13); caregivers of patients with SMI (n = 13); health care providers (n = 13); and community and religious leaders (n = 9) from Sodo District, Ethiopia (see Table 1 for demographics). Sodo District is a rural area of Ethiopia in the Gurage zone comprised of primarily agrarian communities with a majority Ethiopian Orthodox Christian faith. For our sample, the vast majority identified as Gurage and reported practicing according to the Ethiopian Orthodox Tewahido Church. Average age was mid-30s for patients with SMI (M = 35.15, SD = 15.18) and their caregivers (M = 37.38, SD = 9.99), and both samples were close to equally divided between individuals identifying with male and female genders. Most patients and caregivers reported completing primary school or not receiving a formal education. Health workers and community leaders mostly identified as male and reported completing secondary education.

All study participants were recruited from November 2017 until May 2018. Participants completed procedures approved by the Boston University Medical School and Addis Ababa University College of Health Sciences Institutional Review Boards. Depending on literacy, written or verbal consent and permission to audiotape interviews were obtained from participants. Patients and caregivers were drawn from the Programme for Improving Mental Health Care (PRIME), which is a large-scale, multicountry research study investigating the implementation of mental health services integrated in to primary care (Fekadu et al., 2014; Fekadu et al., 2016; Lund et al., 2012). Participants in PRIME-Ethiopia were diagnosed with SMI by trained primary care providers and psychiatric nurses across the eight primary care clinics in Sodo District. Those who had not recently been interviewed for other ongoing PRIME studies were identified and recruited by PRIME staff. Health care providers recruited from primary care clinics in Sodo District were those involved in assessment, diagnosis, treatment, or supervision of patients who presented with mental health concerns. In addition, a community advisory board identified community and religious leaders, traditional and faith healers, or heads of the health bureaus to be interviewed for this study.

Criteria for study participation included: being at least 18 years old; being able to provide informed consent and complete procedures in Amharic; having no current suicidal or homicidal ideation or a suicide attempt within the past 30 days; and being either a patient receiving treatment at a Sodo District primary care clinic or primary hospital for SMI; a caregiver identified by a patient as being a close family member or friend whom the patient gave permission to be involved in the study; a health care provider working at the target health facility administering or supervising care for patients with mental health concerns; or a community and religious leader identified from the PRIME community advisory board.



## **Interview Guide**

Qualitative interviews assessed the following domains: local understanding of traumatic events and PTSD; local presentations of symptoms following trauma and PTSD symptoms; trauma particular to SMI patients; and pathways for interactions between trauma, PTSD, and SMI given the focus on people with SMI. Interviews were focused on understanding participants' own lived experiences, including identifying events that they perceived as being potentially traumatic, factors that contributed to those experiences, and the consequences of these experiences. The interviewer (E.G.S.) utilized a semistructured interview guide that asked open-ended questions in Amharic about experiences and effects of traumatic events as well as targeted inquiries about both common PTEs from the Life Events Checklist for DSM-5 (Gray et al., 2004; Weathers et al., 2013) and broad symptom areas from DSM and ICD (APA, 2013; WHO, 2019). In addition, interview questions were developed utilizing an iterative approach, whereby common themes across early interviews led to inclusion of questions about these events or symptoms across all subsequent interviews (e.g., asking about restraining or chaining of SMI patients). All interviews were conducted and transcribed in Amharic and translated into English by experienced translators who worked in the Department of Psychiatry at Addis Ababa University in Ethiopia.

## **Data Analytic Plan**

All data analyses were conducted using NVivo 12.0. Qualitative coding was iterative and followed descriptive thematic content analysis recommendations (Bernard, 2011; Hsieh & Shannon, 2005). To analyze central research questions, coders (A.A.A., K.H., E.G.S., Y.C., and L.C.N.) utilized both a conventional inductive approach and a directed a priori approach to the content analysis. A subset of English-language interview transcripts was coded collaboratively

until kappa scores of 0.85 were reached across all coded nodes for all coders, after which coders continued analyzing data independently. Coders continued ongoing discussions throughout data analyses that allowed for reexamining data, further theorizing, and making connections between research questions, coding categories, and raw data. Concepts were used to develop a theme codebook consisting of a label, a definition, and illustrative quotes from the data. The codebook and final themes were agreed upon in consultation with mentors and research staff.

## **Results**

Themes from qualitative data for traumatic events and related symptoms consisted of both common local presentations and a priori DSM and ICD criteria (APA, 2013; WHO, 2019). Events and symptoms that were coded as traumatic were categorized into those that: (a) were commonly identified locally, even if they did not meet DSM or ICD criteria, or (b) met DSM or ICD criteria (APA, 2013; WHO, 2019). For the first approach, given study goals of understanding individuals' lived experiences, events were considered traumatic if they were described as being very upsetting, being threatening, had a negative enduring impact on an individual's life, or recovery was difficult after experiencing the event, regardless of whether DSM or ICD (APA, 2013; WHO, 2019) criteria were present (see Table 2 for a full list of events). Similarly, posttrauma symptoms were classified based on reported distress and interference from symptoms related to any traumatic event. For the second approach, events and symptoms that met criteria for at least one of the two latest versions of DSM or ICD (i.e., DSM, fourth edition, DSM, fifth edition, ICD, 10th edition-10, and ICD, 11th edition) were coded as traumatic.

### **Traumatic Events**

#### ***Common Local Traumatic Events***

First, we present themes from the data that identified common local traumatic events, regardless of whether each reported instance met the DSM or ICD (APA, 2013; WHO, 2019) definitions of traumatic events (see Table 2). The most prevalent local traumatic event for the current sample was chaining, restraining, and isolating patients with SMI. These experiences were identified early among responses from study participants and were subsequently included as an interview question. Data from patients, caregivers, health workers, and community leaders indicated that these are common practices, both while patients experienced active psychotic symptoms and when caregivers were concerned that patients may veer into the community unsupervised and damage property or endanger their own or others' safety.

This is common. When they start to show destructive behavior, like when they start to throw stones on cars, on other passengers, start to go to someone's house and destroy, and such practices, they will be chained; sometimes they will be ignored by saying 'who is going to suffer with him/her.' (health worker, male, 46 years old)

Another common local event included loss of property or farm animals. Often such losses ended up having major consequences for those living in a rural setting with limited resources. The causes of such losses included drought, floods, or theft, but the focus of the distress was on the resulting lost property or income, instead of the threatening event that precipitated those losses.

Some of them face certain things that are difficult to live with because as most of them are farmers, they sow from what they worked all year round, and they might lose everything through the changes in the air temperature or shortages of rain during the final stages. So these are the ones which are hard to deal with. (health worker, male, 24 years old)

A closely related common event was fires. However, most descriptions of fires as traumatic events were not focused on loss of life or threatened death or injury but rather on lost property or possessions. Most participants described these events as particularly problematic

because families or individuals typically lost all of their belongings during fires, including their homes.

Fire or explosion might happen. They may lose their house because of the fire accident. Particularly during dry season, there are some places which gets on fire. We have experienced that and we have provided them the support. There are places where I have seen them practically. (community/religious leader, male, 40 years old)

In addition, marriage by abduction (i.e., when a man kidnaps and/or sexually assaults a woman to force a marriage between them) was identified as a local traumatic event. Participants who experienced such an event, as well as other respondents, regarded this experience as highly traumatic, although a small subset of individuals noted that this event was more common in previous decades and currently exists as a practice more closely aligned to elopement. A representative example of those who reported the event as traumatic:

I got married without my willingness. I was learning at the time but I got married by abduction, . . . I was home and they broke [into] the house and took me and then they send elders to settle things. I refuse but I cannot do anything. I got married. (participant with SMI, female, 20 years old)

Lastly, experience of SMI as a traumatic event itself was identified from the data.

Patients, caregivers, and other key informants noted the threat and high stress that SMI places on families and individuals, particularly in low-resourced settings. SMI leads to unemployment, school dropout, loss of income, and caregiver burden on families, all of which threaten livelihoods and family stability and functioning. In addition, illness also caused added stress to the family in the form of stigma toward mental illness from the community, including others' perceptions of the family.

I get very upset and feel sad about my son's condition. He used to go to school and he discontinued his education. I always wonder why this happened to me. . . . I feel so sad. I get upset. He will be so good and he is going to learn and get a job [to] help me, but seeing him like this [with] everything going wrong—I just got upset alone. (caregiver, female, 45 years old)

### ***Traumatic Events Consistent with Western Criteria***

A majority of participants reported traumatic events consistent with DSM or ICD criteria (APA, 2013; WHO, 2019) (see Table 2). The most commonly endorsed events that met DSM and ICD criteria (APA, 2013; WHO, 2019) included the sudden death of a close loved one (such as a parent, sibling, or child), the majority of which were accidental or violent in nature, although some were due to medical complications or lack of access to medical care. Another commonly reported traumatic event involved serious or life-threatening illness, with many reports of progression of untreated illness because of a lack of access to care or a lack of resources to pursue continuous care in larger cities.

She is not doing well till now. She hasn't got solution here, so we took her to Butajira to be seen in the X-ray, but since we are not financially secured, she couldn't get persist[ent] follow-up more than two or three times, and the problem remained hidden. She is sick still now. She hasn't gone to school, she doesn't go far from home, she doesn't eat what she wanted, she doesn't breathe well. She is really sick, and it is complicating my life. (caregiver, male, 25 years old)

In addition, family and intimate partner violence was another DSM and ICD (APA, 2013; WHO, 2019) consistent traumatic event, with typical reports of males directing physical aggression toward partners, children, and persons with SMI who refused to be restrained. A related traumatic event in the community was rape or sexual assault, with some highlighting the increased risk of this occurrence for women with SMI who may be more vulnerable to attack. Interpersonal violence, such as physical attacks or fights, especially between men, were common, and violence stemming from individuals with SMI toward others, including family members, were also reported as a traumatic event. Another theme included being attacked or bitten by an animal, especially by dogs and a few instances of hyenas. Lastly, a commonly reported traumatic event consistent with DSM and ICD criteria (APA, 2013; WHO, 2019) included vehicular accidents, including between cars, bajaj (electrical three-wheeled vehicle), motorcycles, and pedestrians. In particular, many reported increased risk of this trauma for

persons with SMI, who were severely injured or lost their lives because of vehicular accidents (e.g., people with SMI on foot were struck by trucks or cars).

### **Posttrauma Symptoms**

Stakeholders identified symptoms linked to traumatic events either by: (a) endorsing symptoms described by the interviewer or (b) reporting difficulties that ensued as a result of traumatic events in response to open-ended questions. A full list of symptoms can be found in Table 3.

#### ***Common Local Posttrauma-Linked Symptoms***

Local posttrauma symptoms were identified through bottom-up coding of open-ended interview questions based on an emic approach for symptoms that did not clearly align with DSM or ICD criteria (see Table 3). Symptoms of posttrauma reactions included worry or excessive thinking, anger, fear/anxiety/stress, crying, and sadness. Although these reactions may initially seem similar to DSM-persistent negative emotional state, they did not align with the requirement of a persistent state. Also, somatic symptoms such as a burning sensation were noted following traumatic events and consisted of feeling that a certain body part (e.g., limbs, head, back, stomach) is burning. This psychosomatic complaint did not appear to have any specific cultural meaning. Other somatic symptoms included headaches, stomach pains, or physiological sensations (e.g., increased heart rate, shortness of breath, and sweating) that ensued following exposure to traumatic events.

I get alone, complain a lot; get angry and I feel sad [and] I am tired. When they say something I do not like, it stress[es] me out. I feel like there is a big burden on my shoulder[s]. Once it starts to stress me out, it will control my head. It stress[es] me above my neck. (participant with SMI, female, 35 years old)

Another local symptom was described as “holding everything to myself,” meaning that people do not want to share their traumatic experiences and subsequent emotions with anyone else.

If I tell what has happened to me for one person, that person will talk [and] tell that to the other person and then the information will be disseminated. Thus, there is no need of talking or consulting people because they might talk about things I didn't say and they will finally judge me for what has happened to me. So I do not need to consult and complain. (participant with SMI, male, 66 years old)

### **DSM and ICD Trauma-Linked Symptoms**

We assessed for the presence of DSM and ICD symptoms (APA, 2013; WHO, 2019) stemming from reported traumas (see Table 3). The most commonly endorsed symptoms were alterations in mood and thought as a result of traumatic experiences: persistent negative beliefs, chronic negative emotional state, blaming oneself or others, and diminished interest or participation in significant activities. Reexperiencing symptoms were also commonly endorsed; examples include intense emotional reactions to reminders of trauma, strong physical reactions to reminders, intrusive memories of the event, and nightmares related to the event (from most to least frequent, respectively). Symptoms of arousal and reactivity due to trauma included hypervigilance, sleep difficulties, and concentration problems (in that order). Lastly, stakeholders reported internal and external avoidance of reminders of events.

### **Symptoms Linked to Both Trauma and SMI**

Given the focus of the study on participants with SMI, we coded the relationship between trauma and SMI and the symptoms linked to both trauma and SMI. Reports of traumatic events that preceded the onset of SMI were frequent, and the most commonly reported events prior to the onset of SMI were physical assault; rape or sexual assault; family and intimate partner violence; loss of property; and the sudden death of a loved one. Furthermore, stakeholders noted

that traumatic events occurred at an increased rate for SMI patients, particularly chaining, restraining, or isolating; physical assault; rape or sexual assault; transportation accidents; and animal attacks.

Behavioral alterations that were linked to both trauma and SMI included substance use, social isolation, and increased suicidality. Substance use, mainly misuse of alcohol or khat (i.e., *Catha edulis*, a plant that is chewed for its stimulant properties), was prevalent among participants with SMI or their caregivers who had experienced traumatic events. A related theme was substance use as a coping mechanism related to managing responses to difficult events. Furthermore, social isolation was frequent and linked to both SMI and trauma. Examples of isolation included individuals with SMI and posttrauma or PTSD symptoms distancing themselves from others in the community. Participants also felt isolated when community members stigmatized individuals with SMI or those with certain traumas (e.g., rape or sexual assault, SMI in the family). Finally, suicidal ideation or attempts were common in the sample, especially among participants with SMI who endorsed posttrauma symptoms.

### **Reporting Frequencies**

To weigh the effects of social desirability, we separately coded spontaneous reports of traumatic events and ensuing symptoms and affirmative responses to events and symptoms listed by the interviewer. Our results showed that most individuals endorsed traumatic events when asked directly about them ( $n = 39$ ) and more than half of the sample ( $n = 27$ ) spontaneously reported traumatic events without interviewer prompting. Participants endorsed either personally experiencing or witnessing events ( $n = 24$ ) or hearing about traumatic events in the context of daily living ( $n = 20$ ) or at work ( $n = 18$ ). In addition, more than half of the sample ( $n = 29$ ) commented on distress that resulted from these events, with only a few individuals reporting no



distress stemming from traumatic events. Symptoms resulting from trauma were also more frequently endorsed when asked directly by the interviewer ( $n = 35$ ), but nearly half of stakeholders also spontaneously reported symptoms ( $n = 20$ ).

## **Discussion**

The present study examined both common traumatic events and posttrauma symptoms for individuals with SMI and their caregivers in a rural region of Ethiopia. We identified common local traumatic events, characterized local perspectives of the effects of such events, and examined interactions between traumatic events, posttrauma symptoms, and SMI based on both local distress and DSM or ICD criteria (APA, 2013; WHO, 2019) in a rural district of Ethiopia. Overall, we observed events identifiable as traumatic that had accompanying symptoms and exacerbating consequences, all of which can be encompassed under a posttrauma experience. Additionally, many individuals spontaneously reported traumatic events, and an overwhelming majority found these stressful.

Traumatic events included those that were specific to the rural Ethiopian context (e.g., lost property, fires, forced marriage by abduction) and others that were unique to individuals with SMI (e.g., restraining or chaining, experience of SMI itself). In this setting, SMI may be similar to severe human suffering understood in Western definitions, and there is some evidence that SMI may also be considered a traumatic event in Western settings (Mueser et al., 2010; Paksarian et al., 2014). In addition, frequently occurring traumatic events that met DSM and ICD criteria (APA, 2013; WHO, 2019) included sudden death, life-threatening illness, family and intimate partner violence, rape or sexual assault, physical assault, SMI patients' violence toward others, animal attacks, and transportation accidents. One difficulty encountered in the combined emic and etic approaches was, at times, artificial separation between common local events and

DSM or ICD consistent ones (APA, 2013; WHO, 2019). For example, marriage by abduction at times overlaps with sexual assault. In fact, although against the law and common local norms (Boyden et al., 2012), a practice of marriage between a woman and her abductor or sexual assault perpetrator was reported. Both abduction and sexual assault are consistent with Western criteria. However, some instances of marriage by abduction did not rise to level of Criterion A in DSM. Therefore, some delineations between consistent and inconsistent with DSM or ICD (APA, 2013; WHO, 2019) were arbitrary.

Overall, our findings of traumatic events aligned with prior research. Concerns over lost property were similar to two prior qualitative studies that also identified this type of distress in a postwar setting in Ethiopia and in refugees outside Ethiopia (Nordanger, 2007; Shannon et al., 2014). Similarly, a study on posttrauma in Burundi (another sub-Saharan country) also found economic concerns to be primary (Yeomans et al., 2008). In addition, SMI was identified as a traumatic event in part because of the socioeconomic and stigmatizing effects of the illness on the family, such as lower social rank and social isolation, which was a similar complaint made by survivors of the Ethiopian-Eritrean war (Nordanger, 2007). However, research on common traumatic events in Ethiopia and other LMICs in sub-Saharan Africa, especially for individuals with SMI, is limited. Future studies will need to further characterize common traumatic events for individuals in Ethiopia, including urban areas, and in other LMIC settings in efforts to more accurately assess trauma and effectively treat posttraumatic symptoms.

Local perspectives from stakeholders on the effects of traumatic events included symptoms that were associated with the context of rural Ethiopia and others consistent with DSM and ICD (APA, 2013; WHO, 2019). Symptoms specific to the context included uncomfortable emotions (e.g., anger, sadness, fear/anxiety/stress), changes in behavior (e.g.,

worry/thinking too much, crying, “holding everything to myself”), and somatic complaints (e.g., burning sensation, headaches) and physiological experiences (e.g., increased heart rate, shortness of breath). Emotional and behavioral changes were consistent with prior studies for Ethiopian refugees (Papadopoulos et al., 2004; Shannon et al., 2014) and with posttrauma symptoms in other African settings (e.g., Michalopoulos et al., 2020). For example, Ethiopian refugees endorsed culturally bound expressions of distress (e.g., mental pain, thinking too much, becoming speechless, high blood pressure, feeling tight or stiff, negative emotions; Papadopoulos et al., 2004; Shannon et al., 2014). Also, “holding everything to myself” from this study was closely aligned with described lack of social support and a feeling that “no one understands” in prior research (Michalopoulos et al., 2020). Similarly, somatic symptoms described in this study, such as a burning sensation, resembled symptoms of “burn from the inside” or “burning emotionally” identified by Shannon et al. (2014) or “burning sensation in the head” identified in pregnant women with common mental health disorders in Ethiopia (Senturk et al., 2012). Of note, this symptom appeared to be psychosomatic without any particular cultural meaning associated with it. Furthermore, symptoms tied to both SMI and trauma (i.e., suicidality, substance use, and social isolation) were also aligned with posttrauma symptoms in both Ethiopian and non-Western populations (Michalopoulos et al., 2020; Papadopoulos et al., 2004; Shannon et al., 2014).

Regarding DSM symptoms, we found presence of all four symptom clusters from DSM (fifth edition): reexperiencing symptoms, negative changes in mood and thought, arousal and reactivity, and avoidance of external and internal reminders (APA, 2013). This finding aligned with prior research that also found negative mood and thought, as well as hyperarousal, present in non-Western populations (Rasmussen et al., 2014). Similar to prior research, we did not find

the presence of flashbacks, dissociative symptoms, or difficulties in remembering trauma experiences in our sample (Finklestein & Solomon, 2009; Jones et al., 2003). However, contrary to some existing work (Michalopoulos et al., 2015; Neugebauer et al., 2009; Rasmussen et al., 2014; Smith Fawzi et al., 1997), we found that both reexperiencing and avoidance symptoms were common. Lastly, we did not find either of the following symptoms described in previous work: persistent inability to experience positive emotions and detachment from others (Michalopoulos et al., 2020). It is possible that “holding everything to myself” was a local expression of the detachment symptom, although it could also be mistrust of others (i.e., persistent negative beliefs about others).

### **Limitations**

Results from the present study should be understood within their limitations. First, a limitation of the study is the translation process of interviews from Amharic into English. Results from qualitative coding may be less accurate because of loss of local meaning of phrases and particular local language for symptoms with translation, or some coders who were not from Ethiopia may have missed subtle cultural context during coding. However, to mitigate these effects, study staff in Ethiopia (E.G.S.) and a local mentor (A.F.) who are familiar with the Ethiopian context were involved in the development of the codebook. Second, a study limitation included our inability to directly connect symptoms to potential disorders (given that interviews were not clinical or diagnostic in nature). It was, at times, difficult to determine whether particular symptoms resulted from traumatic events and could be categorized as posttrauma. Many symptoms of posttraumatic stress overlap with those of SMI. For example, persistent negative mood and negative thoughts, social isolation, decreased activities, and disturbed sleep patterns may result from severe major depressive disorder, negative symptoms from

schizophrenia, or alterations in mood and increased avoidance because of PTSD. However, many have noted the importance of identifying features of posttrauma independent of fit with DSM or ICD (APA, 2013; WHO, 2019) because overreliance on symptoms of DSM may bias and incorrectly slant symptoms in which features from other disorders (e.g., panic disorder, major depression) may be more prevalent within a particular cultural context than in Western countries (Hinton & Lewis-Fernández, 2011; Rasmussen et al., 2014). To that end, this study focused on such goals. Finally, many individuals interviewed for this study were not in a posttrauma stage (i.e., some trauma events were ongoing). Many were actively coping with family and intimate partner violence and with SMI in the family, which may cause justified anxiety and stress (instead of posttrauma symptoms that require care; Eagle & Kaminer, 2013). Unfortunately, this is a limitation in posttrauma research, and future research will be needed to understand such interactions.

### **Implications for Clinical Services, Theory, and Policy**

A mixed approach, in which both local trauma and symptoms (emic) in combination with occurrence of PTSD symptoms (etic) are assessed, may continue to be an ideal and practical approach in non-Western LMICs for adapting measures and treatments. Assessment measures that are developed or amended to include traumatic events related to individuals with SMI may better serve this group. Also, measures may benefit individuals when assessing symptoms consistent with PTSD and local expressions as well as distress resulting from psychosocial difficulties (e.g., poverty, stigma) related to current conditions, including perceived treatment by others. For treatment, understanding whether symptoms similar to those of PTSD exist in a local culture has important implications for utilizing evidence-based treatment developed in Western settings. Adapted evidence-based treatments are preferable in LMICs because they are short

term, cost effective, and potent in comparison with other types of mental health care (Clark, 2018). In addition, local expressions of distress are important for assessment and treatments to be well integrated into local beliefs and aligned with cultural norms so that they are sufficiently acceptable and effective.

### **Conclusion**

Findings from this study reinforce the need for research to be focused on understanding and treating trauma for individuals suffering from SMI and their caregivers in LMICs. Our results from a rural setting in Ethiopia point to common occurrence of traumatic events and trauma-linked symptoms for patients with SMI and their families or caregivers, including as a result of the SMI diagnosis. These mental health problems were both consistent with trauma and PTSD in Western settings and unique to the local context. Additionally, stigma as well as negative social and economic effects resulting from SMI had additive effects for individuals with SMI and their caregivers or family units. Therefore, such stressors would also likely benefit from being assessed and targeted.

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**Table 1**  
*Demographic Information by Stakeholder Group*

|                      | Participants with SMI<br>(n = 13) |       | Caregivers<br>(n = 13) |       | Health workers<br>(n = 13) |       | Community leaders<br>(n = 9) |       |
|----------------------|-----------------------------------|-------|------------------------|-------|----------------------------|-------|------------------------------|-------|
|                      | Count                             | %     | Count                  | %     | Count                      | %     | Count                        | %     |
| Age ( <i>M, SD</i> ) | 35.15                             | 15.18 | 37.38                  | 9.99  | 29.77                      | 7.46  | 47.00                        | 17.55 |
| Gender (%)           |                                   |       |                        |       |                            |       |                              |       |
| Female               | 6                                 | 46.15 | 7                      | 53.85 | 5                          | 38.46 | 2                            | 22.22 |
| Male                 | 7                                 | 53.85 | 6                      | 46.15 | 8                          | 61.54 | 7                            | 77.78 |
| Ethnicity (%)        |                                   |       |                        |       |                            |       |                              |       |
| Gurage               | 13                                | 100   | 12                     | 92.31 | 10                         | 76.92 | 13                           | 100   |
| Oromo                | 0                                 | 0     | 1                      | 7.69  | 2                          | 15.38 | 0                            | 0     |
| Unknown              | 0                                 | 0     | 0                      | 0     | 1                          | 7.69  | 0                            | 0     |
| Education (%)        |                                   |       |                        |       |                            |       |                              |       |
| No formal            | 5                                 | 38.46 | 7                      | 53.85 | 0                          | 0     | 0                            | 0     |
| Primary              | 7                                 | 53.85 | 5                      | 38.46 | 0                          | 0     | 2                            | 22.22 |
| Secondary            | 1                                 | 7.69  | 1                      | 7.69  | 1                          | 7.69  | 0                            | 0     |
| University           | 0                                 | 0     | 0                      | 0     | 12                         | 92.31 | 7                            | 77.78 |

**Table 2**  
*Common Traumatic Events*

| Traumatic events                                       | No. of stakeholders endorsed |
|--|------------------------------|
| <u>Local events</u>                                    |                              |
| Restraining, chaining, isolating participants with SMI | 30                           |
| Property loss or withheld wages                        | 20                           |
| Fires  | 11                           |
| Animal attack  | 11                           |
| SMI itself   | 11                           |
| Marriage by abduction                                  | 10                           |
| <u>DSM/ICD consistent events</u>                       |                              |
| Sudden death of close loved one                        | 26                           |
| Family or intimate partner violence                    | 20                           |
| Rape or sexual assault                                 | 19                           |
| Life threatening illness                               | 18                           |
| Physical assault                                       | 17                           |
| Transportation accident                                | 15                           |
| Individual with SMI exhibiting violence toward others  | 12                           |

**Table 3***Common Post-trauma Symptoms for Individuals with SMI in Rural Ethiopia*

| Post-trauma symptoms   | No. of stakeholders endorsed |
|--|------------------------------|
| <u>Local symptoms and syndromes</u>                                      |                              |
| Anger  | 15                           |
| Worry/thinking too much  | 15                           |
| Fear/anxiety/stress  | 14                           |
| Crying   | 12                           |
| Sadness  | 13                           |
| Somatic complaints (i.e., burning sensation, headaches)                  | 10                           |
| Physiological symptoms (i.e., increased heart rate, shortness of breath) | 8                            |
| “Holding everything to myself”   | 7                            |
| <u>*DSM/ICD consistent symptoms</u>                                      |                              |
| Re-experiencing symptoms   | 29                           |
| Intense psychological distress at reminders of trauma                    | 25                           |
| Marked physical reactions at reminders of trauma                         | 11                           |
| Intrusive memories of event  | 8                            |
| Nightmares about event   | 6                            |
| Negative alterations in mood and thoughts                                | 31                           |
| Persistent negative beliefs  | 19                           |
| Persistent negative emotional state                                      | 16                           |
| Blaming self or others   | 11                           |
| Diminished interest or participation in activities                       | 7                            |
| Arousal and reactivity   | 27                           |
| Hypervigilance   | 12                           |
| Sleep difficulties   | 9                            |
| Concentration problems   | 8                            |
| Avoidance of external and internal reminders                             | 20                           |

\*Note: only symptoms that consisted themes in the data are reported