

# Chapter 13

## Risk Factors and Prevalence of Mental Illness



Paula C. Zimbrea and Rabin Dahal

### Introduction

Identifying mental illness in refugees poses multiple challenges to providers and organizations worldwide. These challenges range from technical aspects of language barriers and accessibility to phenomenological questions such as the definition of mental illness across cultures.

Nevertheless, most Western societies now consider refugees as a population with high prevalence of mental illness, and multiple efforts are ongoing toward standardizing screening methods and identifying risk factors early in the process of resettlement.

### Screening for Mental Illness

#### *Overseas Screening*

As outlined in Chap. 3, the Secretary of Health and Human Services promulgates, under the authority of the Immigration and Nationality Act (INA) and the Public Health Service Act, regulations outlining the requirements for the medical examination of aliens seeking admission into the United States. The Division of Global Migration and Quarantine provides the Department of State (DOS) and the US Citizenship and Immigration Services (USCIS) physical and mental health screening guidelines for all examining physicians.

---

P. C. Zimbrea (✉) · R. Dahal  
Department of Psychiatry, Yale University, New Haven, CT, USA  
e-mail: [paula.zimbrea@yale.edu](mailto:paula.zimbrea@yale.edu); [rabin.dahal@yale.edu](mailto:rabin.dahal@yale.edu)

The purpose of the overseas mental health examination is to identify applicants with inadmissible health-related conditions that include any physical or mental disorder with associated harmful behavior and any drug abuse or dependence.

Following this evaluation, refugees with a mental disorder are classified as follows:

- *Class A refugees* are diagnosed with a mental disorder with associated harmful behavior that may pose a threat to property or welfare of the alien or others. These refugees need an approved waiver for travel. An approved US healthcare provider is identified for the refugee. When the class A refugee arrives in the United States, he or she must report promptly to the identified US healthcare provider.
- *Class B refugees* are diagnosed with a mental disorder with no current associated harm or behavior, or there is a history of harmful behavior judged not likely to recur. Refugees with a class B mental disorder do not require a waiver, but it is recommended that they are evaluated by a mental health specialist soon after arrival.

### ***Domestic Screening***

The domestic examination includes screening and a more comprehensive assessment, when indicated. The Centers for Disease Control and Prevention (CDC) recommends that mental health screening be performed at the first medical evaluation that refugees undergo in the United States. Other countries have also issued guidelines for mental health screening in refugees. Mental health screening and assessment are discussed in Chap. 14. Chapter 16 reviews best practices in assessing for sequelae of torture in refugees.

The range of psychiatric disorders seen in refugees is broad, and the severity of illness is variable. While posttraumatic stress disorder (PTSD) and depression are most prevalent among refugees, other conditions may be identified. The following sections discuss factors leading to higher risk of mental health conditions in refugees and review prevalence in different refugee populations.

## **Risk Factors for Psychiatric Problems in Refugees**

Risk factors can be broadly considered under three phases of migration: premigration, post-migration, and during migration.

### ***Premigration Factors***

**Age** Studies looking at age of refugees and prevalence of mental illness have produced variable results. Some studies showed that refugees of younger ages experience more depression [1], while other studies showed that adolescents do better

than older adults, especially in the Ethiopian population [2]. And finally, other studies found that more severe PTSD symptoms and anxiety symptoms were associated with older age [3–5].

**Gender** In most studies, women have a higher prevalence of PTSD and depression than men; and this finding has been consistent in refugees from the Middle East, Central Africa, Southern Asia, and Southeast Europe [6]. Other psychiatric conditions such as anxiety and pain disorder are also more common in women: tortured Bhutanese women reported higher prevalence of generalized anxiety disorder, pain disorder, and dissociative disorders than men [7]. Several studies, however, found depression more common in male refugees than in female refugees [1]; oftentimes, this is a reverse of the ratio seen in the country of origin. One study found an abnormal (80%) prevalence of psychosis in men in a Somali refugee clinic population [8].

**Premigration Education** Overall, more educated refugees scored lower on the mental health indices [2], which is thought to be related to loss of status that these refugees experience during the resettlement. At the same time, patients with limited education have more difficulties with integration and are more likely to have depression [1]. In a review of North Korean refugees living in South Korea, the premigration level of education appeared to be a protective factor against developing mental health problems [9].

**Region of Origin** In general, refugees from rural areas had poorer outcomes [2]. Refugees from Europe had relatively worse mental health outcomes than those from Asia or the Middle East when the comparator groups were non-refugee residents in those respective regions [2]. In addition, Southeastern European subjects had more somatic complaints than Central African refugees [10].

**History of Trauma** By definition, a refugee is exposed to traumatic events; and there is no doubt that this exposure increases the risk of mental health problems, as shown in numerous studies. Not all trauma is equal however, and many studies have tried to link specific psychiatric conditions to specific types of trauma. In most studies, trauma is defined according to the *Diagnostic and Statistical Manual of Mental Disorders (DSM) V* as “exposure to actual or threatened death, serious injury or sexual violence” [11]. Multiple studies have looked at what aspect of the trauma influences the risk for subsequent mental health problems. For instance, some authors have divided traumatic experiences in four groups: life threat, war exposure, torture, and sexual violence [12]. Among these, exposure to life threat trauma was a significant predictor of PTSD and depressive symptom severity [12]. Exposure to war had a less severe impact on young adults’ sense of self and other psychological problems compared to older adults [13]. There are multiple studies showing that a history of torture increases the risk of mental health problems [14] and that in victims of torture, mental health problems may persist long after the resettlement [15, 16]. Details on impact of torture will be discussed in Chap. 16.

The concept of “cumulative trauma” summarizes the fact that more episodes of trauma were related with more intensive symptoms of PTSD in refugees (with the exception of the symptom of avoidance, which did not correlate with the number of

traumatic events/experiences) [17]. Cumulative trauma also predicted a higher incidence of anxiety and depression [3].

“Trauma centrality” is another significant concept in understanding the role of trauma in developing psychopathology and defines how close a subject is to the event; directly witnessing murder, kidnapping, or disappearance of family members is associated with emotional suppression, which increases the risk for PTSD [13].

**Death of a Relative** Having lost a relative or a close friend in the home country or during the resettlement has been associated with increased likelihood of psychiatric problems [18–20].

### *Migration Factors*

The following factors characterizing the migration process have been associated with poorer mental health status: being detained after leaving the country [21], immigration detention [22], forced repatriation [23], incidence of torture [14], time spent in the refugee camp, waiting to be granted refugee status/asylum status, and not being satisfied in the camp [24]. Stopping somewhere else before resettlement to the current location was linked with a higher risk of developing major depressive disorder [25]. For minors, being unaccompanied at the time of migration predicted poorer mental health outcomes [26, 27].

Being granted the refugee status had a positive impact on mental health [28]; in addition, having the right to return to the country of origin was also associated with less depression [29].

### *Post-migration Factors*

Although emphasis is often placed on the refugees’ experience of trauma in their country of origin, there is a growing body of evidence that factors related to their post-settlement period can contribute more to mental health problems than experiences prior to fleeing their country [30, 31].

**Communication Problems** Lack of knowledge of the language of the adoptive country can affect the prevalence of mental health problems in two ways: On the one hand, it can seriously impact the quality of adjustment to the new environment and therefore increase the prevalence of depression or anxiety [32–34]. On the other, communication barriers can cause underdiagnosis and poor access to care leading to underreporting of psychiatric problems. Interestingly, however, Somali refugee men with higher English proficiency seemed to have worse mental health in one study [35].

**Housing Accommodations** Permanent private accommodations were related to better mental health than institutional or temporary accommodations [2, 33, 36]. In addition, residential mobility (frequent changes in residence) was seen as stressful

and worsened mental health [37]. Living in unsafe neighborhoods and being concerned for one's physical safety can also contribute to psychiatric problems [18].

**Restricted Economic Opportunity** Lack of employment or loss of economic status has been associated with worse mental health [2, 31, 33, 38]. Stable housing and employment significantly moderated treatment response of patients with PTSD and chronic pain [39].

**Access to Care** Time spent before presenting for services significantly predicted anxiety, PTSD, and depression in torture survivors in the United States [3].

**Other post-migration factors** associated with worse mental health outcomes are worry about family not in the host country [40, 41], initiating conflict not resolved [2], uncertainty of their status [42], experiencing discrimination [43], and facing repatriation to a country they had previously fled [2]. In general, social disconnection in the host country was associated with poorer mental health even three decades after settlement [44]. The impact of acculturation may vary with gender—in Somali girls, for instance, greater Somali acculturation was associated with better mental health, while for Somali boys, greater American acculturation was associated with better mental health [45].

## Prevalence of Common Mental Illnesses

Determining the prevalence of various psychiatric disorders in the refugee populations presents multiple levels of challenges. Most of the prevalence studies were performed in clinical populations, typically refugees who were seen either in mental health clinics or in general health programs, which already introduces a selection bias. Epidemiologic studies attempt to overcome this bias, but face communication difficulties, fear of stigma, and local beliefs about mental illness and how it is integrated in everyday life. These factors lead to low rates of participation and minimization of symptoms on questionnaires. In addition, the measures used to identify mental health problems have to meet the demands of being, at the same time, culture specific, standardized, and practical for the provider. A study looking at how refugee trauma and health status were measured in English-language publications identified over 125 different screening or diagnostic instruments used [46]. This illustrates the complexity of studying the prevalence of mental illness in the refugee population.

### *Communication Challenges*

Communication can be particularly difficult when working with refugees due to multiple factors: language and cultural differences, the effect of culture on symptoms and illness behavior, differences in family structure, acculturation, and intergenerational conflict. These difficulties can be addressed through specific inquiry, use of trained interpreters, culture brokers, meetings with families, and community organizations [47].

### *Use of Interpreters*

The first step in working with an interpreter is selecting the language in which the interview will be conducted. Refugees, like many migrants, oftentimes speak more than one language. Although it may be convenient to conduct the interview in a language that is known to both patient and clinician, effort must be made in order to identify the language in which the patient can be most accurate. This will help avoid abbreviated statements and allow the expression of emotional content. In certain situations, it may be possible to dispense with interpreter services: patients speak some English and insist on conducting the interview in English or later in treatment when patients' mastery of English improves. Interpreters or translators should be familiar with the psychiatric assessment, and they need to be able to translate (to find the corresponding words from one language to another while retaining the same meaning) and also to interpret which implies the transmission of denotative meaning, in addition to the connotative meaning [48]. It is important to train the interpreter to translate in such a way that the clinician can assess the important parts of the mental status exam such as the process, association, and affect.

### *Use of Bilingual Providers*

A frequent model uses the bilingual psychiatric worker, which is sometimes employed in places where there are communities of refugees from the same country or cultures. In this case, attention must be given to boundaries and countertransference. Patients tend to try to recreate the doctor-patient relationship from their country, which often may be different from the accepted model in the United States. Some examples include total trust and obedience in the provider (which can translate into a passive attitude or lack of participation), a desire to compensate the provider with gifts, or asking the provider for a letter of reference for a job application. A sensitive but firm delineation of boundaries will help the refugee in learning and adjusting to the US healthcare system and will promote a healthy societal integration in general. For all clinicians evaluating or treating refugees, but especially for those clinicians who are themselves prior refugees, special attention must be given to countertransference, and additional peer supervision should be sought if necessary.

### *Treatment Beliefs*

Another factor that can affect the attendance of mental health programs and the evaluation of the prevalence of psychiatric disorders in refugees and immigrants is the use of alternative or complementary medicine. Traditionally it was believed that

the use of alternative medicine is associated with avoidance of Western medicine in immigrants. A study of Cambodian refugees showed that 34% of them relied on alternative medicine in the past year; however, only 5% used the alternative medicine exclusively. Surprisingly, using alternative medicine was positively associated with seeking Western sources for mental health care [49].

## ***Phenomenology***

In addition to the above challenges, given that the phenomenology of mental illness can be very different across cultures, Western diagnoses are not universally accepted as valid for these populations. However, most studies of prevalence utilize Western psychiatric diagnoses as outlined in the *Diagnostic and Statistical Manual of Mental Disorders (DSM)* and may overestimate or underestimate true psychological distress in refugee populations. Even the best standardized instruments have to be complemented with a comprehensive assessment within the appropriate cultural framework, and symptoms and impairment have to be observed over time. See Chap. 14 for a discussion of validated assessment scales and mental health assessment in refugee populations.

With all these caveats, studies across refugee populations have consistently shown PTSD and depression to be the most commonly encountered diagnoses. A review of studies of refugees resettled in Western countries showed a PTSD prevalence of 9% and major depression prevalence of 5% [50]. A review of studies that included traumatized refugees in post-conflict regions showed a higher rate of 30% for both PTSD and depression [51]. In general, larger and more methodologically rigorous studies showed lower prevalence of these disorders.

## ***Other Psychiatric Disorders***

Anxiety disorders are found to be co-morbid with PTSD and depression in many individual refugee studies. Enduring personality changes as a manifestation of chronic vulnerability and loss is also reported in refugees.

In addition, other psychiatric disorders have been described in refugee populations:

- *Traumatic brain injury* is frequently present in the medical history of the refugees, and it can present with a wide range of psychiatric problems [52, 53]. One clinical sample of refugees with moderate to severe mental disorder found that 51% of refugees had a history of head injury [54]; the CDC recommends screening all refugees for history of head trauma.
- *Postnatal or postpartum depression* tends to have a higher prevalence in refugee women compared to the general population. One review found the prevalence of

postpartum depression as high as 42% in migrant women (including immigrants, asylum seekers, and refugees) as opposed to 10–15% in native-born women [55]. One study from Jordan reported that half (49.6%;  $n = 181$ ) of the Syrian refugee women scored  $>12$  on the Edinburgh Postnatal Depression Scale (EPDS) [56]. Migrant women at greatest risk to develop depressive symptoms were those who experienced abuse, had pain post-birth, worried about family members left behind, had food insecurity, and had reduced access to healthcare (limited insurance and/or no regular care provider) [56, 57]. A particular risk factor for depression in women is domestic violence, considered to be underreported by refugees due to cultural factors, fear of stigma, and also fear of losing children to the child protection agencies if abuse is reported.

- *Suicide* rates were four to five times higher in Ethiopian immigrants than in the national population in one study [58]. More recently, higher suicide rates were observed in Bhutanese refugees resettled in the United States compared to other refugee groups [59].
- *Pathological gambling* was initially thought to be very common in Cambodian refugees (70% prevalence [60]); however, a later study, considered to be more representative of Cambodian refugee communities in the United States, showed a prevalence of only 13.9% [61].
- *Substance abuse* has been reported as well: 45% of Indo-Chinese refugees had problems with alcohol or tobacco, while 13.9% of the same had problems with drugs [62].
- *Psychoses*: A study of Somali refugees in Minnesota showed an 80% prevalence of psychosis in young Somali men compared to non-Somali clinic samples [8, 94].

Table 13.1 presents a summary of the most illustrative studies regarding prevalence of psychiatric disorders in refugees.

## ***Psychiatric Comorbidity***

It is important to keep in mind that refugees often experience more than one psychiatric condition and that once a mental health problem is present, the risk of co-morbid problems is increased. In a clinical sample of 61 refugee outpatients from psychiatric clinics in Norway, 80% of those who had PTSD had three or more additional psychiatric diagnoses [10]. Hocking found that 99% of mental health problems in refugees were associated with PTSD or depression [93]. In a different study, 40.9% of refugees with PTSD had secondary psychotic symptoms [94]. Women refugees with PTSD had three times higher incidence of positive screening for eating disorders [63].

## **Medical Comorbidity with Psychiatric Illness**

Refugees with mental health problems often present with physical symptoms as their chief complaint, and multiple studies have shown pain to be comorbid with PTSD and depression. Specific PTSD symptoms (Criterion D = negative alterations



**Table 13.1** Prevalence of psychiatric problems in refugees

Year	Author	Population	Prevalence ( <i>lifetime prevalence, unless specified otherwise</i> )	Assessment
2018	Acarturk, Cetinkaya, et al. [24]	Syrian refugees in Turkey	PTSD 83.4% Depression 37.4%	Impact of Events Scale—Revised (IES-R) Beck Depression Inventory (BDI)
2018	Aoun, Joundi, et al. [63]	Syrian refugees in North Lebanon	Eating disorder screen positive 3.2%	SCOFF (SickControlOneFatFood) questionnaire Primary Care PTSD (PC-PTSD) questionnaire
2018	Chung, Shakra, et al. [64]	Syrian refugees	PTSD 30%	Harvard Trauma Questionnaire (HTQ)
2018	Georgiadou, Zbidat, et al. [5]	Syrian refugees in Germany	Depression (moderate to severe) 14.5% Generalized anxiety disorder (moderate to severe) 13.5% PTSD 11.4%	Essen Trauma Inventory (ETI) PHQ-9 GAD-7
2018	Javanbakht, Amirsadri, et al. [65]	Newly arrived Syrian refugees in the United States	PTSD (possible) 32.2% Anxiety 40.3% Depression 47%	PTSD checklist Hopkins Symptoms Checklist
2018	Leiler, Bjarta, et al. [66]	Refugees in Sweden	Depression 56–58.4%	PHQ-9 GAD-7 Primary Care PTSD (PC-PTSD) questionnaire
2018	Mohammad, Abu Awad, et al. [56]	Syrian refugee women living in north Jordan	Postnatal depression screen positive 49.6%	Edinburgh Postnatal Depression Scale (EPDS)
2018	M’Zah, Lopes Cardozo, et al. [67]	Syrian refugees in Atlanta, GA, USA	PTSD 84% Depression 44%	Hopkins Symptoms Checklist-25 (HSCL-25) PTSD-8
2018	Park, Rim, et al. [68]	North Korean adolescent refugees in South Korea	Suicidal ideation 16.7%	Clinical records
2018	Schweitzer, Vromans, et al. 2018 [4]	Sudanese and Burmese refugees in Australia	PTSD 20% Anxiety 29% Depression 41% Somatization 41%	Harvard Trauma Questionnaire (HTQ) Post-migration Living Difficulties Checklist and Hopkins Symptoms Checklist
2018	Verroken, Schotte, et al. [69]	Refugee minors in Belgium	Self-injury behavior (non-suicidal) 17.4%	Brief Non-suicidal Self-injury Assessment Tool (BNNSI-AT) Strengths and Difficulties Questionnaire (SDQ)

(continued)

**Table 13.1** (continued)

Year	Author	Population	Prevalence ( <i>lifetime prevalence, unless specified otherwise</i> )	Assessment
2017	Ahmed, Bowen, et al. [70]	Syrian refugees to Canada Pregnant or postpartum within 1 year	Postpartum depression 58.3% Depression 50.0% Anxiety 25.0% PTSD 16.7%	Structured questionnaire Edinburgh Postnatal Depression Scale
2017	Crepet, Rita, et al. [20]	Libyan and other asylum seekers in Italy	PTSD 31% Depression 20%	Clinical assessment using <i>DSM V</i> criteria
2017	Dennis, Merry, et al. [57]	Recent migrant vs. Canadian-born women Refugee, asylum-seeking vs. non-refugee immigrant	Postpartum depression 11.5% (refugees) vs. 6% (recent migrants) vs. 16% asylum seekers vs. 2.9% (Canadian born)	Structured questionnaire Edinburgh Postnatal Depression Scale
2017	Ibrahim et al. [71]	Syrian Kurdish refugees in Iraq	PTSD 35–38%	Harvard Trauma Questionnaire (HTQ)
2017	Nickerson, Schick, et al. [72]	Refugees resettled in Switzerland	PTSD and depression 50% Depression only 33.6% PTSD only 2.2%	Harvard Trauma Questionnaire (HTQ) Posttraumatic Diagnostic Scale
2017	Slewa-Younan, Yaser, et al. [73]	Afghan refugees in Australia	PTSD 44%	Hopkins Symptoms Checklist-25 (HSCL-25) Afghan War Experience Scale (AWES) impact of events scale-revised (IES-R).
2017	Thela, Tomita, et al. [74]	Refugees/asylum seekers	Anxiety 49.4% Depression 54.6% PTSD symptoms 24.9%	Hopkins Symptoms Checklist, Harvard Trauma Questionnaire (HTQ)
2017	Tinghog, Malm, et al. [75]	Refugees from Syria aged 18–64 years who were granted residency in Sweden on grounds of asylum between 2011 and 2013	Depression 40.2% Anxiety 31.8% PTSD 29.9%	Hopkins Symptoms Checklist, Harvard Trauma Questionnaire (HTQ)
2017	Wong, Cheung, et al. [76]	African asylum seekers in Hong Kong	Depression 36.1%	Everyday Discrimination Scale PHQ-2
2017	Belz et al. [77]	Refugees in a reception center in Germany	PTSD 81.2% Depression 88.2%	Essen Trauma Inventory (ETI) Symptom Checklist (SCL-90-R) Beck Depression Inventory Revision II (BDI-II)

**Table 13.1** (continued)

Year	Author	Population	Prevalence ( <i>lifetime prevalence, unless specified otherwise</i> )	Assessment
2016	Ceri, Ozlu-Erkilic [78]	Yazidi Kurd refugee children and adolescents	Depression 36.8% Insomnia 71% Conversion disorders 28.9% PTSD 10.5% Nonorganic enuresis 18.4%	Clinical evaluation
2016	Morina, Sulaj, et al. [79]	Civilian survivors of the Kosovo War	OCD 35% PTSD 39%	Revised Obsessive-Compulsive Inventory Scale Posttraumatic Stress Diagnostic Scale Hopkins Symptoms Checklist
2015	Akinyemi, Atilola, et al. [80]	African refugees in Nigeria	Suicidal ideation 27.3% (vs. 17.3% in non-refugees)	Mini-International Neuropsychiatric Interview (MINI)
2015	Feyera, Mihretie, et al. [81]	Somali refugees in a camp in Ethiopia	Depression 38.3%	Patient Health Questionnaire Harvard Trauma Questionnaire (HTQ)
2012	Lopes Cardozo, Blanton, et al. [82]	Cambodian landmine survivors	Anxiety 62% Depression 74% PTSD 34%	Harvard Trauma Questionnaire (HTQ) Hopkins Symptoms Checklist
2012	Slewa-Youan, Chippendale, et al. [83]	Iraqi refugees in Australia	PTSD 48% MDD 36% Dysthymia 36%	Clinical evaluation
2011	Husain, Anderson, et al. [84]	Sri Lankans (internally displaced)	PTSD 7% Anxiety 32.6% Depression 22.2%	Harvard Trauma Questionnaire Hopkins Symptoms Checklist
2011	Kroll, Yusuf, et al. [8]	Somali men in an inner-city community clinic	Psychosis 80% ( <i>non-Somali men in the same clinic, 13.7% prevalence of psychosis</i> )	Clinical evaluation, <i>DSM IV</i> based
2011	Schweitzer, Brough, et al. [40]	Burmese refugees in Australia	PTSD 9% Anxiety 20% Depression 36% Somatization 37%	Harvard Trauma Questionnaire (HTQ) Post-migration Living Difficulties Checklist Hopkins Symptoms Checklist
2009	Fawzi, Betancourt, et al. [18]	Haitian refugees	PTSD 11.6% Depression 14% PTSD and depression 7.9%	Interview via standardized questionnaire
2007	Jamil, Farrag, et al. [85]	Iraqi refugees in the United States	Anxiety 80% Depression 80% PTSD 54.3% in men, 11.4% in women	Posttraumatic Stress Diagnostic Scale Hopkins Symptoms Checklist

(continued)

**Table 13.1** (continued)

Year	Author	Population	Prevalence ( <i>lifetime prevalence, unless specified otherwise</i> )	Assessment
2006	Sabin, Sabin, et al. [86]	Mayan refugees to Guatemala	PTSD 8.9% Anxiety 17.3% Depression 47.8%	Harvard Trauma Questionnaire (HTQ) Hopkins Symptoms Checklist-25
2005	Basoglu, Livanou, et al. [87]	Refugees from Yugoslavia	PTSD 33% MDD 10%	Trauma Survivors Questionnaire (RTSQ) 48-Item Emotions and Beliefs After War (EBAW) Semi-structured Interview for Survivors of War (SISOW) <i>Diagnostic and Statistical Manual of Mental Disorders (DSM) IV (SCID-I/NP, version 2)</i>
2005	Steel, Silove, et al. [88]	Vietnamese refugees in Australia	Anxiety 6.1% Depression 6.1% Substance dependence 6.1% (12 months' prevalence)	Composite International Diagnostic Interview (CIDI 2.1)
2005	Marshall, Schell, et al. [16]	Cambodian refugees (99% had experienced near-death situations; 90% had a family member of a friend killed)	PTSD 62% MDD 51% Alcohol use disorders 4%	Harvard Trauma Questionnaire (HTQ) Alcohol Use Disorders Identification Test (AUDIT)
2004	Fenta, Hyman, et al. [1]	Ethiopian refugees and immigrants in Toronto	Depression 9.8%	Composite International Diagnostic Interview (CIDI)
2004	Karunakara, Neuner, et al. [89]	Sudanese	PTSD 46% in refugees (48% in stayers and 18% in Uganda nationals)	Posttraumatic Stress Diagnostic Scale (PDS)
2004	Van Ommeren, de Jong, et al. [7]	Bhutanese refugees in Nepal	Somatoform pain disorders 31% PTSD 85%	Diagnostic interview, ICD 10 based
1999	Peltzer [90]	Sudanese refugees	PTSD 32% Depression 30%	Hopkins Symptoms Checklist
1998	D'Avanzo et al. [91]	Cambodian refugee women	Depression 87% (France) Depression 65% (United States)	Hopkins Symptoms Checklist
1998	Holtz et al. [92]	Tibetan refugees	Anxiety 41.4% Depression 14.4%	Hopkins Symptoms Checklist

in cognitions and mood and Criterion E = alterations in arousal and reactivity according to *DSM V*) have been associated with higher level of reported physical pain [95]. Somatization, a term typically used when patients present with physical complaints without a clear medical or surgical diagnosis, has been long considered rather common in refugees of non-Western origins [96]. It has been postulated that the stigma of mental illness is high in these populations, and having a physical illness is somewhat “more acceptable”; therefore, patients would express their psychological distress through physical complaints. Before attributing physical complaints to history of trauma, it is important however to remember that migrants diagnosed with PTSD and depression have significantly higher rates of chronic disease compared with migrants without diagnosed psychiatric disorders—especially infectious disease, neurological disease, and pulmonary disease [97]. Treatment of the psychological symptoms improves physical symptoms, and conversely, addressing chronic pain facilitates treatment response of PTSD symptoms [39].

### ***Resilience and Posttraumatic Growth***

Although the prevalence of psychiatric problems is relatively high compared to the general population, many of the refugees succeed in integrating in the receiving society and achieving a good quality of life. Long-term outcome studies show that while psychological distress remains high in some resettled refugees, trauma-related symptoms overall decline over time and many refugees have no mental illness at ten-plus years after resettlement [98]. The concept of posttraumatic growth, which summarizes the positive personal changes one makes in reaction to traumatic events, has received recent attention from researchers. Posttraumatic growth is related to a higher quality of life in general; in addition, it explained more of the variance in quality of life than did posttraumatic stress symptoms, depressive symptoms, or unemployment [99]. Religious beliefs are often associated with resilience [32] and less mental health problems [100]. Bridging social networks were also associated with better mental health, particularly in women [101].

### **Culture-Specific Syndromes**

Each culture has specific syndromes that in the Westerner’s eye are classified as psychiatric diseases or specific presentations of more common psychiatric diseases. Various populations can present with specific syndromes, but at the same time, the same syndrome can be seen in different cultures located in different geographic regions. For instance, women who jump into wells in suicide attempts have been described in Pakistan, Punjab, Bangladesh, and Sri Lanka [102]. *Koro* (the penis shrinking syndrome) is a classic example of a culture-bound syndrome seen in different ethnic and geographic groups [103]. Survivors of the Rwanda genocide

divided mental health symptoms into a mental trauma syndrome (a PTSD-like presentation plus some depression symptoms plus “local” symptoms) and a grief syndrome (other depression symptoms plus “local” symptoms) [104]. Multiple culture-specific syndromes have been described in the Cambodian population; among them are *Khya ^ l* attacks (a variant of panic attack, characterized by physical symptoms and fear of heart arrest) and *khmaoch sangot* (“the spirit pushes you down”—a form of sleep paralysis) [105].

Cultural factors may also become specific risk factors for mental health problems; for example, in Lao refugees, violating clan and kingship rules is associated with higher risk of suicide [106].

Transcultural psychiatry, which, in part, focuses on the study of these syndromes, is a rapidly growing discipline. While only a subset of refugees manifest clearly defined cultural syndromes, there are many subtle cultural variations in illness manifestations. In working with refugees, one must not only become familiar with the specific culture to which the patients belong but also consider local and individual specifics and avoid premature labeling. Many areas of conflict are extremely multicultural or multireligious. As in any clinical setting, maintaining an attitude of inquiry and curiosity will facilitate breaking transcultural barriers.

## Summary

Many factors in the premigration, migration, and post-migration phases of displacement predispose refugees to psychological distress and mental illness. While prior trauma is a major risk factor, many other social and acculturation factors in the resettlement period also contribute significantly to mental distress. Prevalence of mental illness in refugees is difficult to measure due to methodological and cultural reasons, but PTSD and major depression are consistently shown to be high compared to host populations in resettled countries. However, refugees also exhibit resilience, and the majority successfully integrate into their host countries and function well over time.

## References

1. Fenta H, Hyman I, Noh S. Determinants of depression among Ethiopian immigrants and refugees in Toronto. *J Nerv Ment Dis.* 2004;192(5):363–72.
2. Porter M, Haslam N. Predisplacement and postdisplacement factors associated with mental health of refugees and internally displaced persons: a meta-analysis. *JAMA.* 2005;294(5):602–12.
3. Song SJ, Subica A, Kaplan C, Tol W, de Jong J. Predicting the mental health and functioning of torture survivors. *J Nerv Ment Dis.* 2018;206(1):33–9.
4. Schweitzer RD, Vromans L, Brough M, Asic-Kobe M, Correa-Velez I, Murray K, et al. Recently resettled refugee women-at-risk in Australia evidence high levels of psychiatric

- symptoms: individual, trauma and post-migration factors predict outcomes. *BMC Med.* 2018;16(1):149.
5. Georgiadou E, Zbidat A, Schmitt GM, Erim Y. Prevalence of mental distress among Syrian refugees with residence permission in Germany: a registry-based study. *Front Psych.* 2018;9:393.
  6. Schubert CC, Punamaki RL. Mental health among torture survivors: cultural background, refugee status and gender. *Nord J Psychiatry.* 2011;65(3):175–82.
  7. Van Ommeren M, de Jong JT, Sharma B, Komproe I, Thapa SB, Cardena E. Psychiatric disorders among tortured Bhutanese refugees in Nepal. *Arch Gen Psychiatry.* 2001;58(5):475–82.
  8. Kroll J, Yusuf AI, Fujiwara K. Psychoses, PTSD, and depression in Somali refugees in Minnesota. *Soc Psychiatry Psychiatr Epidemiol.* 2011;46(6):481–93.
  9. Lee Y, Lee M, Park S. Mental health status of North Korean refugees in South Korea and risk and protective factors: a 10-year review of the literature. *Eur J Psychotraumatol.* 2017;8(sup2):1369833.
  10. Teodorescu DS, Heir T, Hauff E, Wentzel-Larsen T, Lien L. Mental health problems and post-migration stress among multi-traumatized refugees attending outpatient clinics upon resettlement to Norway. *Scand J Psychol.* 2012;53(4):316–32.
  11. American Psychiatric Association. Diagnostic and statistical manual of mental disorders Fifth edition, DSM 5. Arlington: American Psychiatric Publishing; 2013.
  12. Regev S, Slonim-Nevo V. Trauma and mental health in Darfuri asylum seekers: the effect of trauma type and the mediating role of interpersonal sensitivity. *J Affect Disord.* 2018;246:201–8.
  13. Chung MC, AlQarni N, AlMazrouei M, Al Muhairi S, Shakra M, Mitchell B, et al. Posttraumatic stress disorder and psychiatric co-morbidity among Syrian refugees of different ages: the role of trauma centrality. *Psychiatry Q.* 2018;89(4):909–21.
  14. Mills E, Singh S, Roach B, Chong S. Prevalence of mental disorders and torture among Bhutanese refugees in Nepal: a systemic review and its policy implications. *Med Confl Surviv.* 2008;24(1):5–15.
  15. Tang SS, Fox SH. Traumatic experiences and the mental health of Senegalese refugees. *J Nerv Ment Dis.* 2001;189(8):507–12.
  16. Marshall GN, Schell TL, Elliott MN, Berthold SM, Chun CA. Mental health of Cambodian refugees 2 decades after resettlement in the United States. *JAMA.* 2005;294(5):571–9.
  17. Mollica RF, McInnes K, Poole C, Tor S. Dose-effect relationships of trauma to symptoms of depression and post-traumatic stress disorder among Cambodian survivors of mass violence. *Br J Psychiatr J Mental Sci.* 1998;173:482–8.
  18. Fawzi MC, Betancourt TS, Marcelin L, Klopner M, Munir K, Muriel AC, et al. Depression and post-traumatic stress disorder among Haitian immigrant students: implications for access to mental health services and educational programming. *BMC Public Health.* 2009;9:482.
  19. Gormez V, Kilic HN, Orengul AC, Demir MN, Demirlıkan S, Demirbas S, et al. Psychopathology and associated risk factors among forcibly displaced Syrian children and adolescents. *J Immigr Minor Health.* 2018;20(3):529–35.
  20. Crepet A, Rita F, Reid A, Van den Boogaard W, Deiana P, Quaranta G, et al. Mental health and trauma in asylum seekers landing in Sicily in 2015: a descriptive study of neglected invisible wounds. *Confl Heal.* 2017;11:1.
  21. Ichikawa M, Nakahara S, Wakai S. Effect of post-migration detention on mental health among Afghan asylum seekers in Japan. *Aust N Z J Psychiatry.* 2006;40(4):341–6.
  22. von Werthern M, Robjant K, Chui Z, Schon R, Ottisova L, Mason C, et al. The impact of immigration detention on mental health: a systematic review. *BMC Psychiatry.* 2018;18(1):382.
  23. Lee C, Nguyen AJ, Russell T, Aules Y, Bolton P. Mental health and psychosocial problems among conflict-affected children in Kachin State, Myanmar: a qualitative study. *Confl Health.* 2018;12:39.
  24. Acarturk C, Cetinkaya M, Senay I, Gulen B, Aker T, Hinton D. Prevalence and predictors of posttraumatic stress and depression symptoms among Syrian refugees in a refugee camp. *J Nerv Ment Dis.* 2018;206(1):40–5.

25. Tekeli-Yesil S, Isik E, Unal Y, Aljomaa Almosa F, Konsuk Unlu H, Aker AT. Determinants of mental disorders in Syrian refugees in Turkey versus internally displaced persons in Syria. *Am J Public Health*. 2018;108(7):938–45.
26. Norredam M, Nellums L, Nielsen RS, Byberg S, Petersen JH. Incidence of psychiatric disorders among accompanied and unaccompanied asylum-seeking children in Denmark: a nation-wide register-based cohort study. *Eur Child Adolesc Psychiatry*. 2018;27(4):439–46.
27. Manhica H, Gauffin K, Almquist YB, Rostila M, Berg L, Rodriguez Garcia de Cortazar A, et al. Hospital admissions due to alcohol related disorders among young adult refugees who arrived in Sweden as teenagers - a national cohort study. *BMC Public Health*. 2017;17(1):644.
28. Silove D, Steel Z, Susljik I, Frommer N, Loneragan C, Chey T, et al. The impact of the refugee decision on the trajectory of PTSD, anxiety, and depressive symptoms among asylum seekers: a longitudinal study. *Am J Disaster Med*. 2007;2(6):321–9.
29. Alduraiddi H, Waters CM. Depression, perceived health, and right-of-return hopefulness of Palestinian refugees. *J Nurs Scholarsh*. 2018;50(2):163–71.
30. Montgomery E. Long-term effects of organized violence on young Middle Eastern refugees' mental health. *Soc Sci Med*. 2008;67(10):1596–603.
31. Kim I. Beyond trauma: post-resettlement factors and mental health outcomes among Latino and Asian refugees in the United States. *J Immigr Minor Health*. 2016;18(4):740–8.
32. Abraham R, Lien L, Hanssen I. Coping, resilience and posttraumatic growth among Eritrean female refugees living in Norwegian asylum reception centres: a qualitative study. *Int J Soc Psychiatry*. 2018;64(4):359–66.
33. Campbell MR, Mann KD, Moffatt S, Dave M, Pearce MS. Social determinants of emotional well-being in new refugees in the UK. *Public Health*. 2018;164:72–81.
34. Kartal D, Alkemade N, Kiropoulos L. Trauma and mental health in resettled refugees: mediating effect of host language acquisition on posttraumatic stress disorder, depressive and anxiety symptoms. *Transcult Psychiatry*. 2018; <https://doi.org/10.1177/1363461518789538>.
35. Murphy JE, Smock L, Hunter-Adams J, Xuan Z, Cochran J, Paasche-Orlow MK, et al. Relationships between english language proficiency, health literacy, and health outcomes in Somali refugees. *J Immigr Minor Health*. 2018;21:451.
36. Whitsett D, Sherman MF. Do resettlement variables predict psychiatric treatment outcomes in a sample of asylum-seeking survivors of torture? *Int J Soc Psychiatry*. 2017;63(8):674–85.
37. Warfa N, Bhui K, Craig T, Curtis S, Mohamud S, Stansfeld S, et al. Post-migration geographical mobility, mental health and health service utilisation among Somali refugees in the UK: a qualitative study. *Health Place*. 2006;12(4):503–15.
38. Euteneuer F, Schafer SJ. Brief report: subjective social mobility and depressive symptoms in Syrian refugees to Germany. *J Immigr Minor Health*. 2018;20(6):1533–6.
39. Kashyap S, Page AC, Joscelyne A. Post-migration treatment targets associated with reductions in depression and PTSD among survivors of torture seeking asylum in the USA. *Psychiatry Res*. 2018;271:565–72.
40. Schweitzer RD, Brough M, Vromans L, Asic-Kobe M. Mental health of newly arrived Burmese refugees in Australia: contributions of pre-migration and post-migration experience. *Aust N Z J Psychiatry*. 2011;45(4):299–307.
41. Nickerson A, Bryant RA, Steel Z, Silove D, Brooks R. The impact of fear for family on mental health in a resettled Iraqi refugee community. *J Psychiatr Res*. 2010;44(4):229–35.
42. Ben Farhat J, Blanchet K, Juul Bjertrup P, Veizis A, Perrin C, Coulborn RM, et al. Syrian refugees in Greece: experience with violence, mental health status, and access to information during the journey and while in Greece. *BMC Med*. 2018;16(1):40.
43. Beiser M, Hou F. Mental health effects of premigration trauma and postmigration discrimination on refugee youth in Canada. *J Nerv Ment Dis*. 2016;204(6):464–70.
44. Berthold SM, Loomis AM, Kuoch T, Scully M, Hin-McCormick MM, Casavant B, et al. Social disconnection as a risk factor for health among Cambodian refugees and their offspring in the United States. *J Immigr Minor Health*. 2019;21(2):290–8.



45. Ellis BH, MacDonald HZ, Klunk-Gillis J, Lincoln A, Strunin L, Cabral HJ. Discrimination and mental health among Somali refugee adolescents: the role of acculturation and gender. *Am J Orthopsychiatry*. 2010;80(4):564–75.
46. Hollifield M, Warner TD, Lian N, Krakow B, Jenkins JH, Kesler J, et al. Measuring trauma and health status in refugees: a critical review. *JAMA*. 2002;288(5):611–21.
47. Kirmayer LJ, Narasiah L, Munoz M, Rashid M, Ryder AG, Guzder J, et al. Common mental health problems in immigrants and refugees: general approach in primary care. *Can Med Assoc J = journal de l'Association medicale canadienne*. 2011;183(12):E959–67.
48. Westermeyer J. Working with an interpreter in psychiatric assessment and treatment. *J Nerv Ment Dis*. 1990;178(12):745–9.
49. Berthold SM, Wong EC, Schell TL, Marshall GN, Elliott MN, Takeuchi D, et al. U.S. Cambodian refugees' use of complementary and alternative medicine for mental health problems. *Psychiatr Serv (Washington, DC)*. 2007;58(9):1212–8.
50. Fazel M, Wheeler J, Danesh J. Prevalence of serious mental disorder in 7000 refugees resettled in western countries: a systematic review. *Lancet*. 2005;365(9467):1309–14.
51. Steel Z, Chey T, Silove D, Marnane C, Bryant RA, van Ommeren M. Association of torture and other potentially traumatic events with mental health outcomes among populations exposed to mass conflict and displacement: a systematic review and meta-analysis. *JAMA*. 2009;302(5):537–49.
52. Mollica RF, Lyoo IK, Chernoff MC, Bui HX, Lavelle J, Yoon SJ, et al. Brain structural abnormalities and mental health sequelae in South Vietnamese ex-political detainees who survived traumatic head injury and torture. *Arch Gen Psychiatry*. 2009;66(11):1221–32.
53. McPherson JI. Traumatic brain injury in refugees and asylum seekers, *Disabil Rehabil*. 2019 May;41(10):1238–42. <https://doi.org/10.1080/09638288.2017.1422038>. Epub 2017 Dec 28. PMID: 29284288.
54. Doherty SM, Craig R, Gardani M, McMillan TM. Head injury in asylum seekers and refugees referred with psychological trauma. *Glob Ment Health (Camb)*. 2016;3:e28.
55. Collins CH, Zimmerman C, Howard LM. Refugee, asylum seeker, immigrant women and postnatal depression: rates and risk factors. *Arch Womens Ment Health*. 2011;14(1):3–11.
56. Mohammad KI, Abu Awad D, Creedy DK, Gamble J. Postpartum depression symptoms among Syrian refugee women living in Jordan. *Res Nurs Health*. 2018;41(6):519–24.
57. Dennis CL, Merry L, Gagnon AJ. Postpartum depression risk factors among recent refugee, asylum-seeking, non-refugee immigrant, and Canadian-born women: results from a prospective cohort study. *Soc Psychiatry Psychiatr Epidemiol*. 2017;52(4):411–22.
58. Arieli A, Gilat I, Aycheh S. Suicide among Ethiopian Jews: a survey conducted by means of a psychological autopsy. *J Nerv Ment Dis*. 1996;184(5):317–9.
59. Centers for Disease C, Prevention. Suicide and suicidal ideation among Bhutanese refugees--United States, 2009–2012. *MMWR Morb Mortal Wkly Rep*. 2013;62(26):533–6.
60. Petry NM, Armentano C, Kuoch T, Norin T, Smith L. Gambling participation and problems among South East Asian refugees to the United States. *Psychiatr Serv(Washington, DC)*. 2003;54(8):1142–8.
61. Marshall GN, Elliott MN, Schell TL. Prevalence and correlates of lifetime disordered gambling in Cambodian refugees residing in Long Beach, CA. *J Immigr Minor Health*. 2009;11(1):35–40.
62. Yee BW, Nguyen DT. Correlates of drug use and abuse among Indochinese refugees: mental health implications. *J Psychoactive Drugs*. 1987;19(1):77–83.
63. Aoun A, Joundi J, El Gerges N. Prevalence and correlates of a positive screen for eating disorders among Syrian refugees. *Eur Eat disord Rev*. 2019;27(3):263–73.
64. Chung MC, Shakra M, AlQarni N, AlMazrouei M, Al Mazrouei S, Al Hashimi S. Posttraumatic stress among Syrian refugees: trauma exposure characteristics, trauma centrality, and emotional suppression. *Psychiatry*. 2018;81(1):54–70.
65. Javanbakht A, Amirsadri A, Abu Suhaiban H, Alsaud MI, Alobaidi Z, Rawi Z, et al. Prevalence of possible mental disorders in Syrian refugees resettling in the United States screened at primary care. *J Immigr Minor Health*. 2018;21:664.

66. Leiler A, Bjarta A, Ekdahl J, Wasteson E. Mental health and quality of life among asylum seekers and refugees living in refugee housing facilities in Sweden. *Soc Psychiatry Psychiatr Epidemiol.* 2018;54:543.
67. M'Zah S, Lopes Cardozo B, Evans DP. Mental health status and service assessment for adult Syrian refugees resettled in metropolitan Atlanta: a cross-sectional survey. *J Immigr Minor Health.* 2018;21:1019.
68. Park S, Rim SJ, Jun JY. Related factors of suicidal ideation among North Korean Refugee Youth in South Korea. *Int J Environ Res Public Health.* 2018;15(8):1694.
69. Verroken S, Schotte C, Derluyn I, Baetens I. Starting from scratch: prevalence, methods, and functions of non-suicidal self-injury among refugee minors in Belgium. *Child Adolesc Psychiatry Ment Health.* 2018;12:51.
70. Ahmed A, Bowen A, Feng CX. Maternal depression in Syrian refugee women recently moved to Canada: a preliminary study. *BMC Pregnancy Childbirth.* 2017;17(1):240.
71. Ibrahim H, Hassan CQ. Post-traumatic stress disorder symptoms resulting from torture and other traumatic events among Syrian Kurdish refugees in Kurdistan region. *Iraq Front Psychol.* 2017;8:241.
72. Nickerson A, Schick M, Schnyder U, Bryant RA, Morina N. Comorbidity of posttraumatic stress disorder and depression in tortured, treatment-seeking refugees. *J Trauma Stress.* 2017;30(4):409–15.
73. Slewa-Younan S, Yaser A, Guajardo MGU, Mannan H, Smith CA, Mond JM. The mental health and help-seeking behaviour of resettled Afghan refugees in Australia. *Int J Ment Heal Syst.* 2017;11:49.
74. Thela L, Tomita A, Maharaj V, Mhlongo M, Burns JK. Counting the cost of Afrophobia: post-migration adaptation and mental health challenges of African refugees in South Africa. *Transcult Psychiatry.* 2017;54(5–6):715–32.
75. Tinghog P, Malm A, Arwidson C, Sigvardsdotter E, Lundin A, Saboonchi F. Prevalence of mental ill health, traumas and postmigration stress among refugees from Syria resettled in Sweden after 2011: a population-based survey. *BMJ Open.* 2017;7(12):e018899.
76. Wong WC, Cheung S, Miu HY, Chen J, Loper KA, Holroyd E. Mental health of African asylum-seekers and refugees in Hong Kong: using the social determinants of health framework. *BMC Public Health.* 2017;17(1):153.
77. Belz M, Belz M, Ozkan I, Graef-Calliess IT. Posttraumatic stress disorder and comorbid depression among refugees: assessment of a sample from a German refugee reception center. *Transcult Psychiatry.* 2017;54(5–6):595–610.
78. Ceri V, Ozlu-Erkilic Z, Ozer U, Yalcin M, Popow C, Akkaya-Kalayci T. Psychiatric symptoms and disorders among Yazidi children and adolescents immediately after forced migration following ISIS attacks. *Neuropsychiatrie : Klinik, Diagnostik, Therapie und Rehabilitation : Organ der Gesellschaft Osterreichischer Nervenarzte und Psychiater.* 2016;30(3):145–50.
79. Morina N, Sulaj V, Schnyder U, Klaghofer R, Muller J, Martin-Solch C, et al. Obsessive-compulsive and posttraumatic stress symptoms among civilian survivors of war. *BMC Psychiatry.* 2016;16:115.
80. Akinyemi OO, Atilola O, Soyannwo T. Suicidal ideation: are refugees more at risk compared to host population? Findings from a preliminary assessment in a refugee community in Nigeria. *Asian J Psychiatr.* 2015;18:81–5.
81. Feyera F, Mihretie G, Bedaso A, Gedle D, Kumera G. Prevalence of depression and associated factors among Somali refugee at Melkadida camp, Southeast Ethiopia: a cross-sectional study. *BMC Psychiatry.* 2015;15:171.
82. Lopes Cardozo B, Blanton C, Zaleski T, Tor S, McDonald L, Lavelle J, et al. Mental health survey among landmine survivors in Siem Reap province, Cambodia. *Med Confl Surviv.* 2012;28(2):161–81.
83. Slewa-Younan S, Chippendale K, Heriseanu A, Lujic S, Atto J, Raphael B. Measures of psychophysiological arousal among resettled traumatized Iraqi refugees seeking psychological treatment. *J Trauma Stress.* 2012;25(3):348–52.

84. Husain F, Anderson M, Lopes Cardozo B, Becknell K, Blanton C, Araki D, et al. Prevalence of war-related mental health conditions and association with displacement status in postwar Jaffna District, Sri Lanka. *JAMA*. 2011;306(5):522–31.
85. Jamil H, Farrag M, Hakim-Larson J, Kafaji T, Abdulkhaleq H, Hammad A. Mental health symptoms in Iraqi refugees: posttraumatic stress disorder, anxiety, and depression. *J Cult Divers*. 2007;14(1):19–25.
86. Sabin M, Sabin K, Kim HY, Vergara M, Varese L. The mental health status of Mayan refugees after repatriation to Guatemala. *Revista panamericana de salud publica = Pan Am J Public Health*. 2006;19(3):163–71.
87. Basoglu M, Livanou M, Crnobaric C, Franciskovic T, Suljic E, Duric D, et al. Psychiatric and cognitive effects of war in former Yugoslavia: association of lack of redress for trauma and posttraumatic stress reactions. *JAMA*. 2005;294(5):580–90.
88. Steel Z, Silove D, Chey T, Bauman A, Phan T, Phan T. Mental disorders, disability and health service use amongst Vietnamese refugees and the host Australian population. *Acta Psychiatr Scand*. 2005;111(4):300–9.
89. Karunakara UK, Neuner F, Schauer M, Singh K, Hill K, Elbert T, et al. Traumatic events and symptoms of post-traumatic stress disorder amongst Sudanese nationals, refugees and Ugandans in the West Nile. *Afr Health Sci*. 2004;4(2):83–93.
90. Peltzer K. Trauma and mental health problems of Sudanese refugees in Uganda. *Cent Afr J Med*. 1999;45(5):110–4.
91. D'Avanzo CE, Barab SA. Depression and anxiety among Cambodian refugee women in France and the United States. *Issues Ment Health Nurs*. 1998;19(6):541–56.
92. Holtz TH. Refugee trauma versus torture trauma: a retrospective controlled cohort study of Tibetan refugees. *J Nerv Ment Dis*. 1998;186(1):24–34.
93. Hocking DC, Mancuso SG, Sundram S. Development and validation of a mental health screening tool for asylum-seekers and refugees: the STAR-MH. *BMC Psychiatry*. 2018;18(1):69.
94. Nygaard M, Sonne C, Carlsson J. Secondary psychotic features in refugees diagnosed with post-traumatic stress disorder: a retrospective cohort study. *BMC Psychiatry*. 2017;17(1):5.
95. Morina N, Kuenburg A, Schnyder U, Bryant RA, Nickerson A, Schick M. The Association of post-traumatic and postmigration stress with pain and other somatic symptoms: an explorative analysis in traumatized refugees and asylum seekers. *Pain Med*. 2018;19(1):50–9.
96. Rohlf HG, Knipscheer JW, Kleber RJ. Somatization in refugees: a review. *Soc Psychiatry Psychiatr Epidemiol*. 2014;49(11):1793–804.
97. Lolk M, Byberg S, Carlsson J, Norredam M. Somatic comorbidity among migrants with posttraumatic stress disorder and depression - a prospective cohort study. *BMC Psychiatry*. 2016;16(1):447.
98. Steel Z, Silove D, Phan T, Bauman A. Long-term effect of psychological trauma on the mental health of Vietnamese refugees resettled in Australia: a population-based study. *Lancet*. 2002;360(9339):1056–62.
99. Teodorescu DS, Siqueland J, Heir T, Hauff E, Wentzel-Larsen T, Lien L. Posttraumatic growth, depressive symptoms, posttraumatic stress symptoms, post-migration stressors and quality of life in multi-traumatized psychiatric outpatients with a refugee background in Norway. *Health Qual Life Outcomes*. 2012;10:84.
100. Molsa M, Kuittinen S, Tiilikainen M, Honkasalo ML, Punamaki RL. Mental health among older refugees: the role of trauma, discrimination, and religiousness. *Aging Ment Health*. 2017;21(8):829–37.
101. Beiser M, Hou F. Predictors of positive mental health among refugees: results from Canada's general social survey. *Transcult Psychiatry*. 2017;54(5–6):675–95.
102. Guzder J. Women who jump into wells: reflections on suicidality in women from conflict regions of the Indian subcontinent. *Transcult Psychiatry*. 2011;48(5):585–603.
103. Crozier I. Making up Koro: multiplicity, psychiatry, culture, and penis-shrinking anxieties. *J Hist Med Allied Sci*. 2012;67(1):36–70.

104. Bolton P. Local perceptions of the mental health effects of the Rwandan genocide. *J Nerv Ment Dis.* 2001;189(4):243–8.
105. Hinton DE, Hinton AL, Eng KT, Choung S. PTSD and key somatic complaints and cultural syndromes among rural Cambodians: the results of a needs assessment survey. *Med Anthropol Q.* 2012;26(3):383–407.
106. Mandavia A, Huang D, Wong J, Ruiz B, Crump F, Shen J, et al. Violating clan and kinship roles as risk factors for suicide and stigma among Lao refugees: an application of the cultural model of suicide and "what matters most" frameworks. *Isr J Psychiatry Relat Sci.* 2017;54(1):39–48.