Asylum seeker trauma in a student-run clinic: reducing barriers to forensic medical evaluations

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Key points of interest

- Asylum seekers receiving forensic evaluations at a university-affiliated human rights clinic experience a lifetime of cumulative trauma and related, untreated mental health conditions
- Intentional clinic design can support asylum applicants, students, trainees, and clinicians in the work of forensic medical evaluations
- Deploying trauma-centred practices should improve sustained commitment in asylum forensic practitioners and clinics

Abstract

Introduction: The number of forcibly displaced immigrants seeking asylum in the United States continues to rapidly increase. Movement from Latin America to the United States was the third-largest migration worldwide in 2017 (Leyva-Flores et al., 2019). As migration patterns change, understanding the background and trauma profile of newly displaced populations is essential to meet their health needs and aid successful resettlement. University-affiliated student-run asylum clinics conduct a growing number of forensic medical evaluations of asylum seekers and provide a vital lens to study changes in this population's profile over time.

Methods: A retrospective review was conducted of the first 102 asylum seekers receiving forensic medical evaluations between 2019 and 2021 at a university-affiliated student-run clinic, reporting demographics; trauma, medical, and mental health histories; referral patterns; and legal outcomes. Bivariate statistics were used to investigate the relationship between past trauma and mental health outcomes.

Results: Clients reported an average of 4.4 different types of physical, psychological, and sexual ill-treatment per person. The current mental health burden was extensive with 86.9 percent of clients reporting symptoms of PTSD and/or depression. Clinician-student teams evaluated clients within a clinic structure deploying a continuous improvement model to reduce common barriers to foren-

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sic evaluations and promote longitudinal follow-up and referrals.

Discussion: This study demonstrates the complexity of trauma exposure reported by asylum seekers, contributes to the evidence on how trauma results in mental health outcomes, and describes trauma-centred clinic adaptations that reduce barriers to forensic evaluations known to improve the rates of legal protection.

Keywords: Asylum seekers - Forensic medical evaluation - Health and human rights - Student-run asylum clinics - Complex trauma

Introduction

In 2020, persecution and violence around the globe caused more than 80 million people to flee their homes (UNHCR, 2021). Displaced individuals often flee because of complex physical, psychological, and sexual torture that occurs repeatedly over an extended period of time (Aguirre et al., 2020; Asgary et al., 2006; Clément et al., 2017; Doherty et al., 2016; NCTTP, 2015; Pfortmueller et al., 2016). These traumatic experiences and fear for one's safety leave indelible marks on mental health, with as many as 3 of 4 displaced people suffering from posttraumatic stress disorder (PTSD) and depression (Başoğlu et al., 2005; NCTTP, 2015; Miller et al., 2021; Song et al., 2018). The stress of migration journeys and instability of uncertain legal residency status compounds this trauma (Grace et al., 2018; Miller et al., 2021). The duration of ambiguous legal status correlates with worse mental health outcomes, highlighting a humanitarian mandate to rapidly provide secure legal status (Hvidtfeldt et al., 2020).

International laws and treaties allow displaced people fleeing persecution to seek asylum in safe countries (Nicholson & Kumin, 2017). In 2020, 4.1 million individuals sought asylum worldwide, with approximately 300,000 new claims filed in the United States (TRAC, 2021; UNHCR, 2021). At the end of 2021, more than 1.5 million immigration cases still awaited judicial decisions, delaying legal status and impacting the mental health of asylum applicants.

In the U.S., asylum applicants face an adversarial process as they must substantiate claims of persecution, demonstrate credibility, and procure an immigration attorney (Meffert et al., 2010). Faced with language and literacy barriers, economic hardship, and high rates of trauma, asylum seekers face extraordinary challenges in navigating the asylum process. An instrumental tool to mitigate these barriers, improve asylum outcomes, and reduce prolonged ambiguous legal status is the forensic medical evaluation (FME) (Atkinson et al., 2021; Lustig et al., 2008). Conducted by clinicians and supporting legal proceedings, FMEs assess the degree to which an asylum seeker's claims of prior trauma and torture correlate with their physical and psychological exam findings.

University-affiliated student-run asylum clinics (SRACs) in the U.S. hold an increasingly prominent role in conducting FMEs (Sharp et al., 2019). Between 2010 and 2019, SRACs performed more than 1,600 FMEs, with the annual count rising each year (Gu et al., 2021). As 11 million immigrants reside in California, almost a quarter of the foreign-born U.S. population ("*An Equity Profile,*" 2017; Johnson et al., 2021), UCSF students and faculty formed the Human Rights Collaborative (HRC) in mid-2019 to support the increasing regional demand for FMEs.

SRACs and other asylum clinics have reported on the demographic and trauma histories of asylum-seeking clients and patients. These studies depict changes in the demographics of U.S. asylum seekers over time

(Asgary et al., 2006; Cuneo et al., 2021; Lustig et al., 2008; Miller et al., 2021; Moreno et al., 2006; NCTTP, 2015; Zero et al., 2019). In the 2000's, most asylum seekers identified as male, originated from African countries, and fled political persecution. In more recent studies, asylum seekers increasingly identify as female, come from Central America, and seek protection from gender and gang violence.

This paper describes the demographics, trauma experiences, mental health burden, and asylum application grant rates of the first 102 asylum seekers evaluated at UCSF HRC between 2019 and 2021. Our results provide further evidence of the demographic shift in asylum seekers and present a complex trauma profile. We compare characteristics of asylum seekers with and without histories of sexual violence, investigate the relationship between the number of past traumas and mental health outcomes, and demonstrate an unmet need for mental health treatment. We also build on studies aimed at improving SRAC sustainability by reporting strategic trauma-centric practices that reduce client barriers to FMEs and the impact of trauma exposure on clinicians and students (Gu et al., 2021; Ruchman et al., 2020).

Methods

Inclusion criteria and consent

This study provides a retrospective review of UCSF HRC asylum FMEs conducted between April 2019 and June 2021. Eligible clients had entered the U.S. and applied for asylum with legal representation. Research consent and enrolment took place following FME informed consent and were conducted using certified interpreters. HRC enrolled a total of 102 clients with no clients excluded. Three clients did not consent to full data inclusion due to personal safety concerns. HRC used the same procedures for minors with parental consent. FME access was not contingent upon study enrolment. The UCSF Institutional Review Board (IRB) approved all elements of this longitudinal, retrospective observational study on December 20, 2020.

Data collection and security

Lead clinicians completed FMEs and medicolegal affidavits using model forensic asylum templates. Trained medical students used a Qualtrics survey to extract data elements from affidavits. Experienced HRC medical directors regularly performed quality checks through direct data extraction and comparison with student extraction. Collected data included client demographics, history of ill-treatment, medical and mental health history, and physical and psychological exam findings. Researchers anonymised all data, with no identifying information used for reporting. Researchers stored data in a HIPAA-certified, secure system managed by UCSF Information Technology services with access granted only to the IRB-approved HRC research team members. The study also utilised data from client referral forms and follow-up phone calls.

Statistical analyses

The authors performed all analyses using Stata 15.0 and R Studio and conducted bivariate analysis using the Kruskal-Wallis non-parametric test. Because of a significant result of skewness in the outcome variables, researchers analysed the results using a negative binomial model when the outcome did not contain a count of 0, and a Poisson model when there was a 0 count.

Training and qualifications of HRC clinicians

Clinicians performing FMEs were trained, licensed health care professionals, mostly physicians. Clinicians performing psychological

FMEs included physicians, psychologists, and social workers. All HRC clinicians completed a standard 6-hour asylum training at UCSF or an equivalent Physicians for Human Rights training. Most also attended advanced training in asylum forensic documentation. All new clinicians began as observers and then performed independent evaluations observed by medical directors or experienced peers. Medical directors or experienced asylum clinicians peer-reviewed all FME affidavits.

Diagnosing PTSD and depression

Clinicians diagnosed major depression and PTSD according to DSM-V criteria and guided by screening tools (PHQ9 and PCL5; Kroenke et al., 2001; Weathers et al., 2013) as well as a comprehensive clinical interview. Due to the high prevalence of depression and PTSD among asylum seekers, and in congruence with the reporting practices of a prior large-scale study on this population, rates of the highly prevalent diagnoses of depression and PTSD are reported (NCTTP, 2015).

Results

Characteristics of FME evaluations and evaluators

Between April 2019 and June 2021, HRC conducted 102 FMEs, with 79.4 percent performed onsite in monthly clinics and the remainder, mostly psychological FMEs, on a virtual video platform or in an asynchronous clinical visit (Table 1). Based on attorney request, 57.8 percent of HRC clients received combined physical and psychological evaluations, 36.3 percent received solely a psychological evaluation, and 5.9 percent received solely a physical evaluation. During the COVID-19 pandemic, clinician-student teams temporarily performed the interview portion of combined physical and psychological visits virtually but maintained an in-person physical exam. Combined physical and psychological FMEs returned to a fully in-person setting in January 2021.

A diverse team of 34 clinicians, including physicians (55.9 percent), PhD/PsyD psychologists (26.5 percent), social workers (8.8 percent), and nurse practitioners (8.8 percent) conducted FMEs. The primary clinical specialties included Family Medicine, Internal Medicine, and Psychiatry/Psychology, with Neurology, Surgery, Emergency Medicine,

Table 1. HRC Evaluations and Evaluators

	n (%)
Setting (N=102)	
Monthly onsite clinic	81 (79.4)
Out-of-clinic	21 (20.6)
Type (N=102)	
Combined med/psych	59 (57.8)
Psych	37 (36.3)
Medical	6 (5.9)
Evaluator training (N=34)	
Physician	19 (55.9)
Psychologist	9 (26.5)
Nurse Practitioner	3 (8.8)
Social Worker	3 (8.8)
Evaluator specialty (N=34)	
Psychology	12 (35.3)
Family Medicine	7 (20.6)
Internal Medicine	7 (20.6)
Pediatrics	3 (8.8)
Emergency Medicine	2 (5.9)
Psychiatry	1 (2.9)
Rheumatology	1 (2.9)
Surgery	1 (2.9)

Pediatrics, and Rheumatology clinicians also contributing. Clinicians conducted an average of 3 evaluations (range 1-19) over the 27-month period, typically joined by medical students and faculty clinicians in training. Four clinicians each performed 5 or more evaluations during the study period.

Characteristics of HRC asylum seekers

Similar to the asylum seeker community globally (Clément et al., 2017; NCTTP, 2015), HRC's client population was young, with almost half between the ages 18 to 29 (47.1 percent) and 22.5 percent ages 30 to 39 (Table 2). Females accounted for the majority of clients (62.7 percent). Most clients self-reported sexual orientation as heterosexual (83.3 percent) and the remainder identified as lesbian, gay, or bisexual (16.7 percent). More than 85 percent reported twelve or fewer years of formal education, with 43.8 percent describing 8 or less years. The remaining 14.6 percent pursued education beyond high school, with half of those earning an undergraduate or graduate degree.

The majority of clients (75.5 percent) originated in Central American from Guatemala (31.4 percent), El Salvador (25.5 percent), and Honduras (18.6 percent). Mexico (5.9 percent) and Eritrea (4.9 percent) were the next most common countries, with 10 additional countries represented by the cohort. The primary language for 79.2 percent of HRC asylum seekers was Spanish followed by the indigenous Mayan language, Mam (5.0 percent). Nine other primary languages were represented. Nearly one in six clients identified as indigenous (16.2 percent).

At the time of referral, attorneys reported legal bases for asylum as one or more of the following: affiliation with a particular social group (52.5 percent), gang violence (51.5 percent), domestic violence (45.5 percent), political persecution (34.3 percent), sexual violence (28.3 percent), gender-based violence (18.2 percent), and religious persecution (13.1 percent).

Table 2. Client Demographics

	n (%)
Age (N=102)	
< 18	9 (8.8)
18 - 29	48 (47.1)
30 - 39	23 (22.5)
40 - 49	16 (15.7)
50 - 59	6 (5.9)
Gender (N=102)	
Female	64 (62.7)
Male	36 (35.3)
Transgender	2 (2.0)
Sexual orientation (N=78)	
Heterosexual	65 (83.3)
Lesbian	6 (7.7)
Gay	5 (6.4)
Bisexual	2 (2.6)
Education (N=89)	
0 - 8	39 (43.8)
8 - 12	37 (41.6)
> 12	13 (14.6)
Language (N=101)	
Spanish	80 (79.2)
Mam	5 (5.0)
Tigrinya	5 (5.0)
English	5 (5.0)
Punjabi	2 (2.0)
Other (4 languages)	4 (4.0)

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Country of origin (N=102)	
Guatemala	32 (31.4)
El Salvador	26 (25.5)
Honduras	19 (18.6)
Mexico	6 (5.9)
Eritrea	5 (4.9)
Other (10 countries)	14 (13.7)
Bases for asylum (N=99)	
Affiliation with a social group	52 (52.5)
Gang violence	51 (51.5)
Domestic violence	45 (45.5)
Political persecution	34 (34.3)
Sexual violence	28 (28.3)
Gender-based violence	18 (18.2)
Religious persecution	13 (13.1)
Indigenous identity (N=99)	
Yes	16 (16.2)
No	83 (83.8)

Trauma history reported by asylum seekers

During the FME, clinicians documented comprehensive histories of physical, psychological, and sexual trauma and torture (torture definition as it appears in the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment). Every HRC client reported past trauma or torture in their country of origin (Table 3).

Trauma types broadly fell into physical, psychological, and sexual categories, with corresponding prevalence rates of 80.8 percent, 100.0 percent, and 61.6 percent, respectively. Moreover, 78.6 percent of HRC clients experienced trauma as children. Nearly all suffered from multiple types of trauma (93.9 percent). On average, HRC clients experienced 4.4 different types of past trauma per person, with more than a quarter (26.3 percent) suffering six or more different types. The five most prevalent forms of physical ill-treatment included blunt trauma (74.7 percent), penetrating trauma (23.2 percent), asphyxiation (15.2 percent), burns (13.1 percent), and positional torture (11.1 percent). Top reported forms of psychological ill-treatment included threats (61.6 percent), witnessing the death or torture of others (34.3 percent), sexual or religious insults (16.2 percent), and forced nudity (12.1 percent).

Table 3. Client Trauma History Profile

	n (%)
Broad categories of trauma (N=99)	
Physical	80 (80.8)
Psychological	99 (100.0)
Sexual	61 (61.6)
Childhood abuse	66 (78.6)
Number of trauma types (N=99)	
0	0 (0.0)
1	6 (6.1)
2	17 (17.2)
3 - 5	50 (50.5)
6 - 10	23 (23.2)
> 11	3 (3.0)
Most prevalent forms of physical violence (N=99)	
Blunt trauma	74 (74.7)
Penetrating trauma	23 (23.2)
Asphyxiation	15 (15.2)
Burns	13 (13.1)
Positional torture	11 (11.1)

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Most prevalent forms of psychological trauma[a] (N=99)	
Threats	61 (61.6)
Witnessing death or torture	34 (34.3)
Insulted for sexuality/race/religion/gender	16 (16.2)
Forced nudity	12 (12.1)
Privacy deprivation	9 (9.1)
Most prevalent forms of sexual violence[b] (N=99)	
Sexual assault[c]	56 (56.6)
Insulted for sexuality or religion	16 (16.2)
Forced nudity	12 (12.1)

a Psychological trauma refers to ill treatment that does not depend primarily on physical pain or physical stress.
b Sexual violence is defined broadly as unwanted sexual actions or words that harm another person.
c Sexual assault refers to nonconsensual physical sexual activity. It includes rape as well as acts that do not include penetration.

Reports of sexual violence among asylum seekers

The majority of clients reported a history of sexual violence (SV) (61.6 percent). Over half (56.6 percent) experienced sexual assault, including rape, forced masturbation, oral sex, and other unwanted sexual touching (Table 3). Asylum seekers who experienced SV were young (47.5 percent ages 18 to 29), more likely to identify as female (78.7 percent with SV vs 39.5 percent with no SV, $p<0.01$), and more likely to have fewer years of formal education (grade 0-8 peak educational attainment for 50.0 percent with SV vs 15.6 percent with no SV, $p<0.01$). As with the overall cohort, asylum seekers reporting SV experienced multiple forms of trauma, including blunt trauma (85.2 percent) and witnessing the death or torture of others (29.5 percent).

Physical and psychological exam findings during FME

For clients who received a physical examination during the FME, clinicians documented physical signs of trauma or torture in 90.8 percent (Table 4). Psychological evaluations

Table 4. Examination Findings, Evaluation Conclusions, and Case Outcomes

	n (%)
Trauma documented on physical exam (N=65)	
Yes	59 (90.8)
No	6 (9.2)
Psychiatric diagnosis documented in FME (N=99)	
PTSD	80 (80.8)
Depression	37 (37.4)
Any	86 (86.9)
Prior/current psychiatric diagnosis or treatment (N=99)	
Prior diagnosis	10 (10.1)
Currently receiving treatment	5 (5.1)
Istanbul Protocol evaluation conclusions (N=90)	
Not consistent with	0 (0.0)
Consistent with	24 (26.7)
Highly consistent with	56 (62.2)
Typical of	8 (8.9)
Diagnostic of	2 (2.2)
Case legal outcomes (N=102)	
Denied	0 (0.0)
On appeal	7 (6.9)
Asylum granted	23 (22.5)
Case rescheduled due to COVID-19	37 (36.2)
Awaiting immigration decision and/or attorney follow-up	35 (34.3)

documented a psychiatric diagnosis in 86.9 percent of clients, including 80.8 percent with PTSD and 37.4 percent with depression. Despite the high prevalence of mental health conditions, few reported any prior diagnostic evaluations or treatment: 10.1 percent of clients reported past psychological diagnosis or treatment and only 5.1 percent were currently receiving psychiatric medications or counselling.

Evaluation conclusions and legal outcomes

The Istanbul Protocol recommends standard language to describe the degree of correlation between FME findings and a client's reported persecution (*Istanbul Protocol*, 2022). Using Istanbul Protocol language, HRC clinicians concluded that FME findings were "diagnostic of" (2.2 percent), "typical of" (8.9 percent), "highly consistent with" (62.2 percent), and "consistent with" (26.7 percent) clients' reported past and fear of future persecution (Table 4).

During the study period, immigration courts adjudicated only 23 (22.5 percent) client cases. The remaining clients await immigration court decisions or attorney action. Of the 23 HRC clients with a legal status determination, 100.0 percent were granted asylum or other forms of legal protection (as compared with the 63.9 percent grant rate in San Francisco immigration court as of November 2021) (TRAC, 2021).

Bivariate analysis for predictors of mental health outcomes

Prior studies have attempted to understand the relationship between a traumatic event and its impact on future mental health. Findings diverge as to whether characteristics intrinsic to a trauma event, such as its severity or frequency, affect mental health outcomes (Başoğlu et al., 2005; Nosè et al., 2020; Song et al., 2018; Steel et al., 2009). We tested whether the number of types of trauma events experienced was associated with a higher prevalence of PTSD or depression at the time of FME. The analysis did not find a significant correlation between the number of types of trauma events and either PTSD or depression (Table 5).

Referrals and outcomes from longitudinal follow up

In response to the high prevalence of untreated psychological conditions and unmet social needs, HRC established a longitudinal follow-up program in October 2020 to increase access to social services, primary care, mental health, food assistance, and other urgent client needs. Medical students contacted clients at 2 weeks, 3 months, 6 months, and 12 months after FME. During the program's first nine months, students called 47 clients, reaching 83.0 percent and referring 74.5 percent to services. HRC placed 144 referrals for an average of 4.1 referrals per client.

Table 5. Number of Trauma Types Experienced and PTSD/Depression Correlation

Number of trauma types	All clients	Received PTSD diagnosis		Received depression diagnosis	
	n	n (%)	p-value	n (%)	p-value
1	6	4 (66.6)	ns	0 (0)	ns
2-3	41	34 (82.9)		14 (34.1)	
4+	52	42 (80.8)		23 (44.2)	

The most common referrals included mental health services (28.5 percent), housing (19.4 percent), primary care (15.3 percent), food assistance (13.2 percent), and health insurance coverage (7.6 percent). Other referral types included dental care, clothing, support groups, employment services, and language services.

Clinic interventions and adaptations to client trauma

HRC clients carried a tremendous burden of complex trauma and mental illness. In response, clinic leaders enacted numerous adaptations to the clinic structure and function to lower barriers to FME access, reduce the impact of trauma suffered by clients, and

Table 6. HRC Adaptations to Trauma Burden

Improvements to the client's experience
1. Diverse, language-concordant medical students called clients en route to HRC, met clients in person at the clinic, and explained FME procedures to enhance comfort and safety.
2. Attendance barriers were reduced by providing childcare onsite, offering a healthy fresh meal, and paying for safe transportation to and from clinic.
3. To eliminate the deployment of family, friends, or attorneys as interpreters, HRC used UCSF certified medical interpreters to improve the quality and consistency of interpretation and enhance client confidentiality.
4. To meet client needs and foster social integration, medical students provided each client local referrals based on immediate needs and reached out by phone over 12 months.
Improvements to the evaluator's experience
5. To assure a pipeline of trained clinicians, all clinical evaluators engaged in formal FME training, observed at least one evaluation, and engaged in peer review.
6. Monthly onsite clinics allowed evaluators to perform FMEs with medical student volunteers and medical director support for complex evaluations.
7. To optimise documentation quality, HRC used a model FME template based on the Istanbul Protocol and expert consensus. The template improved consistency and quality of the evaluations and data capture. HRC now uses a digital version of the standard template.
8. Briefing meetings occurred at the beginning and end of onsite evaluations. A separate formal debrief led by a social worker focused on skill development, peer support, and secondary trauma reduction.
Improvements to the medical student leadership experience
9. Medical student volunteers completed a 10-week elective on immigration and asylum medicine.
10. Employing a continuous improvement model, student leaders reviewed referrals, affidavits, and client follow-up data to improve client-centred processes.
11. To reinforce the medicolegal partnership, clinicians and students met with attorneys to review FME goals and key findings.
12. By engaging in multiple roles such as program leaders, data managers, clinic operations coordinators, legal network development, and trainers, students enhanced leadership skills and dedication to social justice efforts.

minimize vicarious trauma in HRC students and clinicians (Table 6).

Discussion

We presented a demographic and trauma profile of asylum seekers in the San Francisco Bay Area between 2019 and 2021, conducted analyses to better understand their health needs, and reported practices aimed at minimizing FME barriers and reducing clinician and student trauma impact.

HRC site-specific data reinforce reports of the demographic shift among asylum seekers in the U.S. over the past two decades (Asgary et al., 2006; Cuneo et al., 2021; Lustig et al., 2008; Miller et al., 2021; Moreno et al., 2006; NCTTP, 2015; Zero et al., 2019). Whereas U.S. asylum seekers were previously mostly men fleeing political persecution from Africa, today the majority of asylum seekers are female victims of domestic and gang violence from Guatemala, Honduras, and El Salvador. A core competency of clinicians performing FMEs is to understand current and emerging trends in torture and ill-treatment across the world. Thus reports describing asylum seeker characteristics are essential to informed medicolegal affidavits.

HRC FMEs revealed a high burden of cumulative traumatic experiences in this population of asylum seekers. Clinicians recorded histories of ill-treatment, torture, and assault that typically involved multiple perpetrators and settings and occurred over decades. These patterns are reflected in studies of asylum populations around the world (Asgary et al., 2006, Baranowski et al., 2019, Clément et al., 2017). Together, they demonstrate a common narrative of asylum seekers as individuals who flee systemic violence after enduring multiple forms of prolonged and recurring trauma.

More than 60 percent of HRC clients, including 79 percent of women, experienced sexual violence. Comparing SV rates in HRC clients to international data is challenging due to a lack of consistent SV definitions, populations, and research methodology. A 2018 critical interpretive synthesis described that, "clear and robust SV rates among migrants, asylum seekers and refugees are lacking… there is a pressing need for high-quality representative prevalence studies on SV…" (De Schrijver et al., 2018). The range of SV rates in asylum seekers and refugees has been reported from 10-90 percent in a variety of settings and using a variety of definitions, but rarely have rates exceeded 50 percent in non-conflict settings. HRC's reported rate of sexual violence is consistent with other reports among Central American women (Aguirre et al., 2020; Baranowski et al., 2019; Cuneo et al., 2021).

The high prevalence of female asylum seekers and high rates of SV reflect the gender-based violence (GBV) from which HRC clients flee in Guatemala, Honduras, and El Salvador. Clinical interviews revealed a common narrative of women who were abused as children, entered early marriages or domestic partnerships, and remained in relationships in which they endured frequent physical, psychological, and sexual assault. Several relevant reports on migrants from Central America also document systemic gender-based violence. UNHCR's Women on the Run (2015) describes similar rates of beatings, intimidation, threats, and insecurity among detained Central American women, most of whom neither filed police reports nor felt protected by authorities. Reporting on asylum seeking women presenting for FME, Baranowski (2019) documented early exit from school, forced child labour, and intimate partner violence including blunt and sexual trauma. The current study augments existing literature by further characterizing systemic GBV in Guate-

mala, Honduras, and El Salvador and demonstrating that it persists. Importantly, a recent report suggests GBV may be worsening in these countries ("*No way out*," 2020).

Among HRC clients, mental health conditions were ubiquitous and often diagnosed for the first time during the FME. Four of every five clients received a diagnosis of PTSD, which is in the higher range of prevalence rates reported by other studies of refugees and asylum seekers (Blackmore et al., 2020; Hameed et al., 2018; van der Boor et al., 2020). The ICD-11 Complex-PTSD (CPTSD) diagnosis includes symptoms which occur more often after exposure to events from which "escape is difficult or impossible such as childhood sexual abuse, torture, and detention" (Fortuna et al., 2019; Hyland et al., 2018; Maercker, 2021). Nearly every HRC client experienced some level of psychological trauma, and almost 80 percent reported significant and prolonged childhood abuse or ill-treatment. While evaluating the high rate of PTSD in HRC clients, we considered several hypotheses. HRC has an intense focus and training on trauma-informed care environments and interview techniques. Additionally, HRC rates likely reflect an asylum population from different countries with different torture and ill-treatment patterns than in other published reports.

Asylum seekers receiving an HRC FME rarely experienced single, discrete traumatic events such as an arrest, kidnapping, or persecution of limited severity and relatively short duration. More commonly, HRC clients suffered a lifetime of traumatic experiences. Among refugees and asylum seekers, there have been various attempts to understand which components of a trauma history portend a worse mental health prognosis. Some report that mental health outcomes depend on qualities intrinsic to past traumatic events, such as number, type, or severity of trauma (Knipscheer et al., 2015; Miller et al., 2010; NCTTP, 2015; Nosè et al., 2020; Steel et al., 2009). In contrast, others theorise that mental health outcomes result from variables independent of the trauma itself ("*Australian guidelines,*" 2019, Başoğlu et al., 2005; Song et al., 2018), especially co-occurring stressors such as poverty and deprivation, perception of safety, and a lack of control over life. Our findings suggest that the prevalence of mental illness in asylum seekers is independent from the number of past types of trauma experienced. As research in this area progresses, findings will likely demonstrate that the number or severity of trauma events alone is inadequate to predict mental health conditions which are inherently multifactorial.

Contrasting the high rates of mental illness with the low rates of psychological care in HRC clients highlights their level of disenfranchisement. Literature supports that after migrant torture survivors enter the U.S., delays in treatment correlate with a higher prevalence of mental illness (Song et al., 2018). There is an urgent need for understanding the impact of FMEs and early referrals to trauma-informed healthcare on mental health trajectory. The HRC experience presents early insight into the integration of follow-up services into the FME process. Other SRACs have previously described follow-up programs (Ruchman et al., 2020). By documenting the most requested referral services, we demonstrate the health and social needs of asylum seekers. Like the reported national experience, HRC clients who received an FME and had their case adjudicated were granted asylum at a very high rate (Nicholson et al., 2017; TRAC, 2021), a critical finding given that delays in asylum decisions worsen distress and increase the risk of psychiatric disorders (Hvidtfeldt et al., 2020).

Translating findings into HRC policies and practices

HRC leaders enacted real-time interventions and adaptations to its clinic structure and functions in response to the complexity of client trauma and the trauma impact on clients, students, and clinicians (Table 6). HRC learned from the experiences of other SRACs in the U.S as well as from case series in similar settings across the world (Gu et al., 2021; Ruchman et al., 2020; Sharp et al., 2019). Prior studies on SRAC structure and format have focused on the challenges of optimizing logistics, retaining clinicians, building sustainable leadership, improving handoffs between student leaders, and increasing caseloads. We describe the practical steps we deployed to reduce the barriers and trauma faced by clients and clinicians.

FME access barriers included transportation to clinic, after hours options, childcare, language concordant medical students and clinicians, and free high-quality interpretation services. HRC provides FMEs, safe transportation, meals, childcare, and certified, trauma-trained interpreters at no cost to clients. HRC clinicians working in this environment of intense trauma face the challenges of client, student, and their own trauma. Clinicians and students listen to graphic stories of trauma after their regular workdays. To mitigate the impact of this exposure, HRC holds briefing meetings before and after evaluations and a monthly debrief led by experts from a partner trauma treatment centre. Finally, peer review and mentoring foster community and social connection.

Study challenges and limitations

The HRC population is small to date and representative of asylum seekers in the Bay Area. FMEs gather data on trauma and torture experiences through self-report, and there is typically no opportunity for independent confirmation, as is true for all asylum evaluations.

Prior studies of asylum seekers and refugees report a significant relationship between the number of prior trauma events and mental health, although with small effect sizes (Knipscheer et al., 2015; NCTTP, 2015; Song et al., 2018; Steel et al., 2009). HRC analyzed the association between the number of past types of trauma and current PTSD or depression symptoms. Sample size and uniformity as a result of high rates of PTSD limited this analysis. Evaluation of legal outcomes of FMEs in clients is limited by the large backlog of immigration cases in the U.S. during the study period.

The Istanbul Protocol outlines international legal standards and guidelines for legal and medical investigations of torture and ill-treatment. UCSF HRC employed these practices as a benchmark for conducting FMEs. While standard domains appear in most FME templates, there is no consistent national or international format that includes standard data elements across all types of evaluations. Terminology, level of detail, format, and inclusion of data elements such as psychological and functional impact, body diagrams, resilience factors and suicide risk are highly variable (Scruggs et al., 2016). Report format is influenced by evaluator preferences, type of evaluation, and other factors (Ferdowsian et al., 2019). In this study, trained medical students extracted data from narrative FMEs and, as a result, the study may underestimate the prevalence of findings due to inconsistent documentation as well as variable capture of some metrics. HRC is mitigating these limitations by ongoing training, peer review of all cases, and use of a standard evaluation template collected through a survey tool (Redcap, https://redcap.vanderbilt.edu) which allows affidavit consistency as well as direct, rapid, and

accurate data capture and analysis. The cases described in this study reflect only those performed over HRC's first 24 months, a period when the HRC did not yet use the new standard template.

Future directions

Studies are needed to develop standard metrics for FME documentation, post-asylum mental health and functional status measures, and strategies to improve consistency of asylum grant rates. Additionally, research is needed to investigate the impact of documentation of early or prolonged trauma on legal and clinical outcomes as well as the impact of forensic evaluations on clients and family relationships. A revised model FME template should collect data on medical comorbidities and client grief, hope, and resilience. Asylum seekers will benefit from studies clarifying the relationship between trauma events, survivors' perception of events, and incident mental health outcomes.

A serious challenge for the UCSF HRC is its location in an academic medical centre, similar to other SRACs. Models for sustainable funding for pro-bono evaluations in this typically uninsured population, academic recognition for unpaid student and faculty time, support for treatment of secondary trauma in clinicians, and systems that support ongoing clinician contributions to social and health justice are urgently needed.

Conclusion

This report provides a descriptive analysis of the demographic patterns and characteristics of trauma and mental health sequelae among a sample of U.S. asylum seekers predominately from Central America. The constellation of lifelong traumatic events in these clients demands a trauma-centred setting for forensic evaluations. As long as human rights violations persist around the world, survivors with critical needs for safety, forensic medical documentation, and treatment will seek care and support. Systems must strengthen resources for the prevention, treatment, and resilience in trauma and torture survivors. To have a significant impact, clinicians and researchers should further describe the profile of trauma and torture survivors, as well as the impact of FMEs on their legal, psychological, social, and functional status.

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