

Acceptability and preliminary effects of intensive brief trauma-focused PTSD treatment for refugees: a pilot study

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Key points of interest

- Intensive brief trauma-focused PTSD treatment significantly reduced PTSD symptoms in a heterogeneous sample of refugees.
- The intensive brief trauma-focused PTSD program was well-received by participating refugees, and no adverse events were detected.
- Further research, with a larger sample size and an active control group, is needed to confirm that Intensive brief trauma-focused PTSD treatment is an effective treatment option for refugees in outpatient settings.

Abstract

Background: Post-Traumatic Stress Disorder (PTSD) is a significant mental health concern in refugee populations exposed to trauma and displacement. Traditional treatments for PTSD often involve lengthy interventions. However, there's a growing interest in exploring more condensed, intensive treatments to improve outcomes and accessibility for refugees. **Objective:** This study aimed to evaluate the acceptability and preliminary effects of an intensive brief trauma-focused PTSD treatment (ITT) program delivered to refugees at the Swedish Red Cross Treatment Center for Persons Affected by War and Torture in Uppsala, Sweden. **Method:** Ten participants were enrolled in the study and received ITT over five consecutive weekdays comprising Eye Movement Desensitization and Reprocessing Therapy (EMDR), prolonged exposure (PE), and physical activity (PA). Acceptability was assessed by analysing journal notes and clinicians' and patients' open-ended responses to sets of questions designed to elicit the patients' experiences and potential adverse events. Baseline and follow-up data regarding PTSD, disability, and anxiety or depression were collected and analysed. **Results:** The study demonstrated that ITT is an acceptable and viable treatment option for refugees with PTSD. No serious adverse events were reported, although some found the treatment very taxing. Overall, the ordeals were perceived as worthwhile. The statistical analyses showed substantial and significantly reduced PTSD symptoms and anxiety levels. Reductions in depression symptoms and disability were also observed but were non-significant. **Conclusions:** The results suggest that this brief and massed treatment program for refugees with PTSD is a well-received and in a very preliminary assessment, might be an effective treatment option. Identifying less suitable candidates and conducting larger, controlled studies with longer follow-up periods are needed to establish ITT's efficacy in this population.

Keywords: trauma, post-traumatic stress disorder, intensive treatment, refugees, EMDR, prolonged exposure

Introduction

Providing effective psychotherapy and adequate psychological support for refugees traumatised by war, conflicts, flight, persecution, or torture is of utmost importance. It is estimated that 108 million individuals are displaced due to persecution, conflict, violence, human rights violations, and events seriously disturbing public order in the world today (UNHCR, 2022). The prevalence rates of post-traumatic stress disorder (PTSD), depression, and anxiety are alarmingly high among refugees, with estimates reaching up to 31, 32, and 12 %, respectively (Blackmore et al., 2020). Notably, these disorders often co-occur at elevated rates, which means even greater individual suffering (Teodorescu et al., 2012; Tinghög et al., 2017). A recent systematic review also reported the prevalence rate of complex PTSD (CPTSD) to be as high as up to 38 % in treatment-seeking samples of refugees (de Silva et al., 2021). The high prevalence of CPTSD among refugees underscores the considerable challenges in achieving treatment efficacy, given that CPTSD is associated with lower treatment effects (Cloitre, 2021).

Thus, societies face immense challenges when it comes to addressing the tremendous psychological needs of refugees. At the same time, there is a widespread assumption that traditional trauma-focused psychological interventions can overwhelm refugees (and patients with CPTSD in particular), and hence should, an adapted or phased approach be used instead (Cloitre et al., 2012; Nickerson et al., 2011). Even though the empirical support for these claims is questionable (De Jongh et al., 2016; Heide et al., 2016), the effect is that the psychological needs of refugees are often left unattended due to worries among healthcare personnel to do more harm than good in combination with an understanding that it is not an efficient use of scarce resources.

To optimise the use of resources, it would be of great value to find an evidence-based treatment for refugees that is both effective and safe and that alleviates adverse symptoms quicker than more traditional treatments. Intensive brief trauma-focused PTSD treatment (ITT) is a type of intervention that potentially could fill these needs and purposes as it is effective and safe in non-refugee populations (Auren et al., 2022; Van Woudenberg et al., 2018). In this study, we will investigate the efficacy and acceptability of an ITT program for refugees, which has not previously been evaluated.

For the general populations with PTSD, most treatment guidelines, as well as systematic reviews, favour trauma-focused therapy, e.g., (Bisson et al., 2013; Bryant, 2019; Tol et al., 2013) such as prolonged exposure (PE), cognitive processing therapy as well as eye movement desensitisation and reprocessing (EMDR). The evidence base relating to refugees specifically is less robust, but the present-day findings are nonetheless con-

current (Turrini et al., 2019). In recent years, several studies, primarily from the Netherlands, have shown that intensive brief trauma-focused PTSD treatment programs (6-8 days), including PE, EMDR, and physical activity (PA), appear to be at least as effective as more traditional trauma-focused approaches in reducing PTSD symptomology (Alting van Geusau et al., 2021; Auren et al., 2022; Van Woudenberg et al., 2018; Voorendonk et al., 2020). This massed and condensed format, utilising therapist rotation (i.e., when multiple therapists alternate in treating the patient), appears to be advantageous in that it reduces dropout rates and keeps the therapy more focused on the essential exposure elements than traditional trauma-focused therapy and hence reduces therapist drift (Hendriks, 2019; Van Minnen et al., 2018). It thus appears that ITT, at least in theory, is a particularly valuable treatment option for refugees with PTSD or CPTSD in outpatient settings.

It should be noted that psychotherapy for refugees with PTSD usually includes a set of unique challenges. First, the type of experiences resulting in severe traumatisation in war and conflict settings are often more complex and prolonged in comparison to traumatising episodes experienced during peacetime in less chaotic environments or of more single-event characters (Ter Heide & Smid, 2015). Second, many refugees have resettled in distant regions or countries where they lack the proficiency to speak and understand the native language, with the consequence that any psychological treatment must be delivered with the assistance of an interpreter, which can impede treatment success (Sander et al., 2019). Third, when settling in foreign environments, living conditions are often uncertain and stressful (Malm et al., 2020; Tinghög et al., 2017). This often interferes with the patient's ability to follow the treatment plan (Semmlinger & Ehring, 2022) as well as the effect of the treatment (Sonne et al., 2021). Appointments are, for example, missed or continuously rescheduled, or the therapist feels it is necessary to pause the active treatment to focus on stabilisation instead (Shapiro, 2018). Consequently, a pilot project, in which an ITT program was implemented in an outpatient clinic in Sweden specialising in care for refugees who have experienced trauma due to torture, armed conflict and/or flight, was set up. The specific aim of this study is to 1) preliminary evaluate the ITT program's efficacy on symptom and disability reduction among refugees, and 2) assess the acceptability of ITT among refugees, including identification of potentially adverse events.

Methods

The study was a single-centre uncontrolled trial conducted at the Swedish Red Cross Treatment Center for Persons Affected by War and Torture in Uppsala, Sweden. Recruitment com-

menced in February 2021 and concluded on Mars in 2023. It was decided that the data collection would end when data on 8-10 participants had been collected, enabling us to statistically substantiate large effect sizes corresponding to a Cohen's *d* of about 1.3 when assuming a power of 80% and an alpha of 0.05. Ethical approval for the study was obtained from The National Ethical Review Board in Sweden, Ref. No. 2021-07003-01.

Participants

Broad inclusion criteria were employed to increase the external validity. Participants had to meet the following inclusion criteria: 1) PTSD diagnosis according to DSM-5 2) traumatised due to armed conflicts, torture, persecution, and/or flight 3) at least four events fulfilling criteria A in DSM-5 4) being 18 years or older and 5) cognitive abilities to follow the instructions in EMDR and PE treatment. Individuals assessed as having elevated risk for suicidal or serious self-harm behaviour, harmful substance use, and ongoing psychosis or currently experiencing violent living conditions were excluded from the study.

Recruitment

A total of ten participants were recruited in regular clinical practice. All therapists at the centre were instructed to identify patients who might be interested in participating in this study and who met the inclusion criteria. Both new and long-term patients were eligible for participation. Half of the patients invited to participate declined. There were varied reasons why a patient did not want to participate of which the most common was logistical issues and feeling uncomfortable being treated by multiple therapists. When an individual had expressed interest in participating, formal informed consent was obtained. Thereafter, the preparation phase began, which included working out various logistical issues, e.g., making sure the participants had the practical ability to participate as intended, as well as deciding on traumatic events to target during the treatment week.

Therapists and assessors

All clinicians who delivered EMDR or PE had been trained in the respective methods. The involved clinicians were licensed psychologists or licensed psychotherapists, and one was a licensed health-care counsellor. All were employed at the centre and had extensive experience in providing psychotherapy to refugees with PTSD. None of the clinicians had any previous practical experience with ITT. However, all of them had participated during the adaptation phase during which ITT was delivered to three patients at the clinic. These patients are not included in this study sample. Before and during the early set up of the pilot project, involved clinicians participated in several workshops on

ITT led by a researcher and psychologist with experience in setting up an ITT program in an outpatient setting in the Netherlands, i.e. (Alting van Geusau et al., 2021). Supervision of PE and EMDR was continuously provided by certified supervisors and trainers, and collegial supervision was also a regular feature.

It was the involved therapist who assessed the participant for research purposes. The project leader (LV) provided assessment supervision. This in-house project leader had the task of aiding assessors when needed, which included issues about how assessment tools should be administered and used. To further ensure that all participants underwent the same procedure, a detailed folder, describing all study-specific requirements, was compiled, and made available.

Treatment and procedures

The specific intensive brief trauma-focused PTSD treatment program (ITT) evaluated in this study is an adapted version of ITT programs developed for and evaluated in both in and out-patient settings among non-refugee populations (Alting van Geusau et al., 2021; Auren et al., 2022; Van Woudenberg et al., 2018). The main treatment components and treatment strategies are the same, e.g., EMDR, PE, and PA delivered in a massed and condensed format, following the same arrangement each day of treatment using therapist rotation.

Experienced interpreters were booked when needed and, in all cases, when interpreters were needed the same interpreter was used for the entire ITT to make the patient feel as comfortable as possible. The decision of which interpreter to involve was made in collaboration with the patients to ensure both high quality and that the patients felt comfortable. Finding an appropriate interpreter and establishing a good working relationship was accomplished during the preparations leading up to the ITT. The centre has extensive experience working with interpreters to achieve high-quality therapy sessions.

The enrolled patients received treatment for five consecutive working days, each day structured the same way. It includes a 105-minute morning session of PE and a 90-minute EMDR session in the afternoon, provided by certified therapists. The EMDR sessions followed Shapiro's EMDR protocol (2018), with a particular focus on phase 4. In this phase, the aim is to process trauma by combining internal visualisation of the traumatic memory with dual attention stimuli, such as eye movements. The PE sessions consisted of imaginal exposure, involving repeated recounting, revisiting, and processing of the traumatic memory according to the protocol established by Foa and colleagues (2019). In short, imaginal exposure, an essential component of both PE and EMDR, entails repeatedly recounting the most distressing episode of a traumatic event to

gain new insights into one's ability to cope with the traumatic content. This process helps reduce the distress linked to the memory and challenges negative beliefs about the trauma (Foa et al., 2019). The discussion regarding the active mechanisms and differences between EMDR and PE is ongoing and extends beyond the scope of this article.

Even though therapist rotation was used, each participant/patient had a specific therapist assigned to oversee the process and be his or her primary contact person (hereafter referred to as the "primary therapist"). It was also this therapist who prepared the patient for taking part in the ITT program, including the identification and assessment of traumatising memories to be targeted in the EMDR and PE sessions. The preparations were conducted in accordance with standard protocols (Foa et al., 2019; Shapiro, 2018).

Between the two trauma-focused treatment sessions, patients had a break consisting of lunch and 60 minutes of physical activity (PA) exercise or activities together with a physiotherapist or a psychologist. These activities were of low to moderate intensity and individually designed to fit the patient's preference and physical abilities (e.g., walks, relaxation, and music exercises) and hence were not a particular protocol used. The individualised activities were prepared and delivered by psychologists, a physiotherapist, and a musical therapist. All individualised activities included some physical activities and were intended to pause the processing of trauma by redirecting focus to the "here and now" by engaging the patient in a structured activity. During the patient's lunch break, a handover was conducted from the morning PE session to the afternoon EMDR session, providing general information about the completed session and details about the identified hotspots. In the afternoon, at the end of the EMDR session, patients were given the opportunity to reflect on the day together with the therapist. All sessions could involve psychoeducational elements, for instance, making sure the patient properly understood the treatment process and normalising various physical and emotional reactions common when processing trauma memories.

A structured clinical interview was scheduled around three to five weeks before and five weeks after the intervention (Clinician-Administered PTSD Scale for DSM-5; CAPS-5; Weathers et al., 2013). Self-report data regarding symptoms of PTSD, depression, anxiety, and disability were to be collected 1-2 weeks before and 1-2 weeks after the intervention. However, due to various reasons, patient data were not always collected at these pre-established time points (for details see Table 1)

Outcomes measures and acceptability assessment

The primary outcome measure of the study is symptom severity of PTSD, which was measured with CAPS-5 and the PTSD Checklist for DSM-5 (PCL-5; Blevins et al., 2015). CAPS-5 is considered to be the gold standard for PTSD assessment and was in this study used to establish PTSD diagnosis before treatment and to determine if a PTSD diagnosis was still present at follow-up. However, both instruments can be used to measure PTSD severity and an individual score between 0 and 80 is obtained, where a higher score indicates more severe symptomology. A score of 31 or 33 is commonly used to screen for PTSD (Bovin et al., 2016).

The secondary outcomes consisted of anxiety, depression, and disability. Hopkins Symptom Checklist-25 (HSCL-25) consists of two subscales intended to measure both anxiety (10 items) and depression severity (15 items). The score of the subscales - item averaged scores - range from 1–4. When used as a screening instrument to identify probable cases, a score of around 1.75-2.00 is commonly used as a cutoff for both anxiety and depression (Oruc et al., 2008; Ventevogel et al., 2007). Whodas-12, a generic measure of health and disability, was used to assess the participants' disability levels before and after taking part in the intervention. The simple scoring approach where the responses on the twelve individual items (0–4) were summed up (0-48) was used (Üstün et al., 2010).

All self-report measures were available in Swedish, English, Arabic, and Persian at the centre. Participants used the version they preferred or the Swedish version that was filled in with the

Table 1. Number of weeks before and after treatment instruments were administered. Mean and SD

Measurement instruments	Before	After
CAPS-5 (PTSD)	3.7 (3.0)	5.3 (0.5)
PCL-5 (PTSD)	2.8 (4.0)	2.2 (1.4)
Whodas-12 (Disability)	1.6 (1.0)	2.0 (1.3)
HSCL-25 (Depression, Anxiety)	1.9 (1.1)	2.0 (1.3)

assistance of the interpreter. The participants' primary therapist was present when the self-reported scales were administered to assist if needed.

Acceptability is in this study defined as a tolerable and non-harmful experience and the absence of adverse events among patients. However, standard trauma treatment always evokes strong emotional and physical reactions in patients, which is also to be expected in ITT. Thus, non-acceptability in this study means when new or unexpected reactions appear that are not commonly seen in standard treatment. Acceptability was assessed by carefully scrutinising patient-specific qualitative information from three different sources. These sources consisted of patient records and written responses to two sets of questions - one for the patient and one for the primary therapist. All involved therapists were instructed to provide detailed journal notes as well as to report any potential adverse effects in the patient's record. The set of open-ended or probing questions for the patient was designed to elicit their experiences of taking part in ITT and to prompt them to identify aspects they felt were problematic or could be improved, e.g., How did you experience the ITT? Do you experience residual symptoms that you would like to have further treatment for? Would you recommend the ITT for other persons with PTSD? If so, why or why not? Could the arrangement of ITT be improved? The second set of open-ended or probing questions was filled out by the patient's primary therapist and focused on how they felt that the ITT had worked for the specific patient, including describing aspects that had been problematic for the patient. e.g., what difficulties and challenges were encountered during ITT? Was the patient suitable for ITT? Does the patient have residual symptoms and need additional treatment?

Analysis

In this one-group pre- and post-test study, paired t-tests were used to assess treatment effects on symptom and disability levels. When information was missing (6%), cases were excluded from the relevant analyses. Within-group effect sizes are presented as Cohen's *d*. A Cohen's *d* of 0,2 is generally interpreted as a small effect, 0,5 as a medium effect, and 0,8 and above as a large effect. To evaluate the robustness of the statistical analyses, an additional series of non-parametric Wilcoxon signed-rank tests were performed. However, all difference measures displayed kurtosis and skewness statistics between -1 and 1, suggesting that parametric statistical methods may nonetheless be appropriate. 95% confidence intervals were calculated for means and effect sizes, while Wilcoxon signed-rank tests are presented as Z-scores with p-values.

Qualitative data of acceptability was analysed and summarised by the following steps: 1) The first author (PT) carefully read all transcripts of open-ended responses to the probing questions filled out by the primary therapists and the participants, while noting similarities and any potential adverse events. 2) Thereafter the first author summarised the findings, while simultaneously reviewing if it was in accordance with an independent and structured thematic reorganisation of the same transcripts made by the second author (LV). 3) The second author went through the patient records to identify if any potential adverse effects could be identified there 4) Finally, the authors discussed the written summary and revised it so it adequately would represent the data. This process was finalised when consensus was reached. It should also be noted that regular team meetings were held where the patient's ITTs were discussed with involved clinicians (LV, NM, and JJ participated in these meetings), providing additional input to which the summary could be contrasted and validated.

Results

The age of the participants ranged from 21 to 63 years (Mean 45.8, SD 13.2), with seven identified as men and three as women. They originated from Afghanistan, Burundi, Congo-Kinshasa, Iran, Iraq, Rwanda, and Syria and had been in Sweden for one to fourteen years ($M = 6.4, SD = 4.3$); five had lived in Sweden for five years or less. Three participants used an interpreter for all sessions, four required an interpreter for some but not all sessions, and three did not use an interpreter. Reported traumas included various types of events such as sexual violence, torture, relationship violence, persecution, and combat or war-related events, with most of the participants having endured traumas both in childhood and adulthood. In terms of employment status, five were on full or part-time sickness absence, one was an undocumented migrant and unemployed, three were studying, and one was in an apprenticeship. Three participants had previously received trauma-focused therapy treatment interventions, and six had received other types of psychotherapy, either at the Red Cross Treatment Center or elsewhere. All participants, except three, held permanent residency in Sweden.

All participants had a score above 1.75 on the depression subscale (HSCL-25), suggesting that they all would meet the diagnostic criteria of depression (see Figure 4a), while seven out of nine measured reported a symptom load of anxiety indicating plausible clinical anxiety (see Figure 3a). Some participants experienced dissociative symptoms.

All enrolled participants completed the treatment week. Although one participant missed the second day and one treatment program was terminated, in accordance with protocol,

after the fourth day when the treatment objectives were met. On average each patient met with 5.0 different therapists (SD 0.9) and 1.5 physiotherapists/psychologists (SD 0.5) during the treatment week.

Treatment effects

Figures 1 to 5 show the trajectories for all participants in relation to PTSD, anxiety, depression, and disability levels. In Figures 1b to 5b, the mean pre- and post-treatment levels are displayed. Following treatment five of nine participants no longer met the diagnostic criteria of PTSD according to CAPS-5. Table 2 further shows that significant ($p < 0.05$) and substantial treatment effects could be detected regarding CAPS-5 (Cohen's d 1.91, CI 95% 0.77-3.02), PCL-5 (Cohen's d 1.31, CI 95% 0.43-2.15) and anxiety (Cohen's d 1.47, CI 95% 0.49-2.41). The treatment effects on disability and depression were however lower and non-significant.

Acceptability

Several participants expressed that the treatment week was very challenging, especially during the first days. It was not uncommon to feel exhausted. Several of the participants also reported having physical symptoms such as headaches, while a couple expressed that they had trouble eating during the lunch break due to low appetite. Participants reported increased irritability, sleeping disturbances, and anxiety, with one individual experiencing dissociative symptoms outside the treatment settings. Dissociate symptoms here refer to a temporary mental state in which a person feels disconnected from their thoughts, feelings, memories, or surroundings, leading to a sense of detachment or altered reality. Such symptoms, while sometimes challenging, are a common and expected part of trauma-focused therapy (Hoeboer et al., 2020) and typically subside as treatment progresses. For this participant, the dissociated symptoms diminished after a few weeks. During this period, ongoing support was provided at the clinic.

The PA sessions were overall highly appreciated, and some felt they were necessary to get through the day. It appeared that relaxation exercises with calming music were particularly appreciated.

Even though most patients found the treatment week to be tough and painful and some experienced that their symptoms even increased, but no one indicated that it was not worth it. Some had recommended ITT to friends or acquaintances, and some wanted to continue the program so they could work with other traumatic episodes not covered during the week. Overall, the participants were satisfied with all the care and encouragement they received at the clinic during the treatment week.

Some of the individuals who initially had been nervous about the therapist rotation felt that it had been rather unproblematic or even positive.

Figure 1. Individual trajectories CAPS-5 scores ($n=9$)

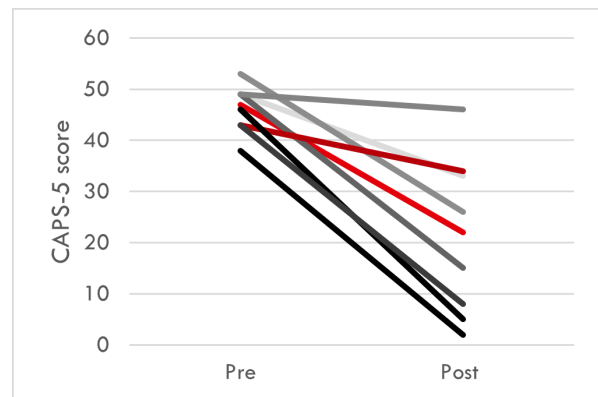


Figure 2. Individual trajectories PCL-5 scores ($n=10$)

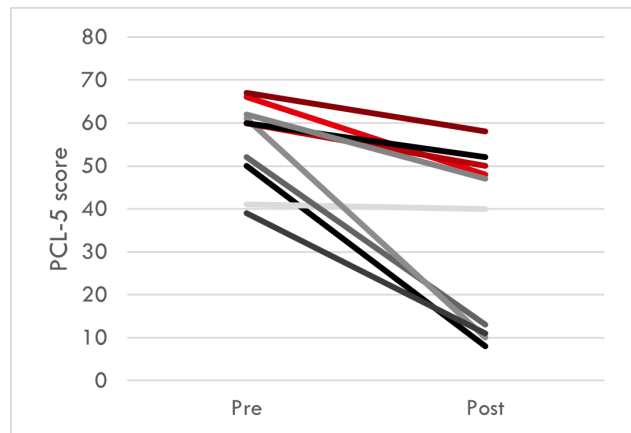


Figure 3. Individual trajectories Anxiety scores (HSCL, $n=9$)

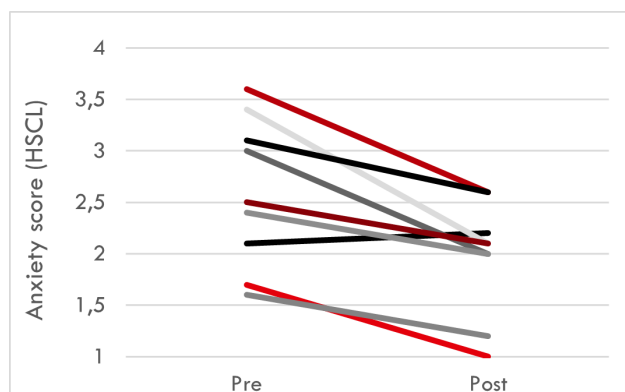
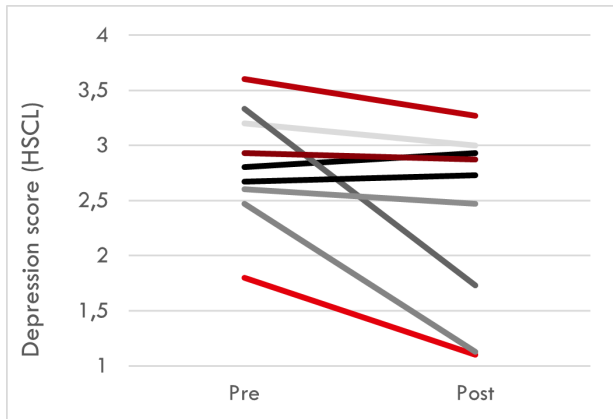
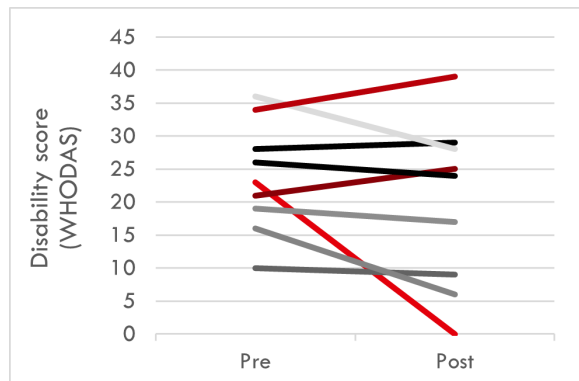


Figure 4. Individual trajectories Depression scores (HSCL, $n=9$)**Figure 5.** Individual trajectories Disability scores (WHODAS, $n=9$)**Table 2.** Treatment effects on PTSD, anxiety and depression symptoms, and disability presented as Cohen's d (CI 95%) using pre- and post-treatment measurements.

	Cohen's d (CI 95%) *
PTSD (CAPS-5)	1.91 (0.77-3.02)
PTSD (PCL-5)	1.31 (0.43-2.15)
Depression (15 items HSCL)	0.75 (-0.02-1.47)
Anxiety (10 items HSCL)	1.47 (0.49-2.41)
Disability (Whodas-12)	0.46 (-0.24-1.14)

*Paired t-tests

Discussion

The results from this pilot study indicate that intensive brief trauma-focused PTSD treatment (ITT) is an acceptable and preliminary effective treatment for PTSD and anxiety among refugees. It was also revealed that although this was perceived as a challenging and highly taxing treatment, it was tolerable and recommended by the participants. No serious adverse or unexpected events were reported. The unwanted symptoms that nonetheless were reported were minor and short-lived and could be addressed by the therapist. These symptoms are commonly encountered also in traditional trauma-focused treatment.

In accordance with ITT studies on other populations, this study showed that participants missed very few therapy sessions (Ragsdale et al., 2020). All participants completed the treatment program and only one participant missed any treatment sessions. Hence this suggests that post-migration stress does not seriously impact refugees' ability to participate. The short and compressed format might make it easier for the participants to remain motivated. Adverse life events may be less likely to influence their motivation i.e., the treatment is only one week. The format may also make the therapist more successful in encouraging and supporting the participants. Neither does the reliance on interpreters seem to negatively impact the process or outcome of the ITT, at least were no such concerns raised by the therapists or the participants themselves.

The individually designed physical activity (PA) was reported as being important for making it through the treatment week. A similar sentiment is echoed in Thoresens et al.'s study where non-refugees undergoing ITT in an outpatient setting perceived the PA as a "mental breathing space" (Thoresen et al., 2022). Some studies have shown that PA boosts the trauma-focused therapy's effect on PTSD severity (e.g., (Rosenbaum et al., 2015)). However, a recent RCT study of an ITT program showed that trauma-focused therapy in combination with PA was not more effective in reducing PTSD symptoms than trauma-focused therapy and a guided creative task (Voorendonk et al., 2023). It can nonetheless be argued that some type of recreational activity helps the patients through the emotionally taxing treatment week (Carroll et al., 2007; Dets & Charlier, 2020), hence reducing the risk of dropout.

The treatment effects on PTSD symptomology and anxiety were substantial and in line with findings from other studies on ITT (Sciarrino et al., 2020). That the treatment effects on depression and disability were lower and non-significant or borderline significant is hardly surprising given that ITT is not designed to target such ailments. Any positive treatment effects that ITT may have on depression or disability could be a side effect of reduced PTSD severity and somewhat shared

aetiology (Stander et al., 2014). It is also worth noting that the treatment did not benefit all participants equally, as a few patients reported a rather meagre decline in PTSD severity. In future studies, a close investigation of the variations in treatment success is warranted. Plausible reasons for poorer treatment outcomes, also suggested by therapists in this pilot study, were that participants were exposed to adverse life events (e.g., post-migration stress) around the time of the treatment, that participants were too emotionally detached to benefit fully or due to the shortness of the treatment program. It has also been reported that persistent depressive symptoms are linked with poorer treatment outcomes in ITTs (Burton et al., 2022).

Even though this study demonstrates that massed interventions or ITT could also be effective for refugees traumatised due to torture armed conflict and/or flight, this pilot study has several limitations that should be taken into consideration when interpreting the findings. First, the sample size is small and thus underpowered to statistically corroborate treatment effects that are not substantial, i.e., Cohens' *d* around 1.0 or more. A larger sample size would also have enabled the identification of specific patient characteristics that predict treatment success. Second, the study participants were used as their own controls. Hence, the study had no control group to which participants were randomly assigned, which would have strengthened the validity of our findings. Third, there was some variation in when pre- and post-measurements were collected in relation to the treatment initiation or finalisation. A longer follow-up period would also have provided valuable information on the stability of the treatment effects. Fourth, the data sometimes had to be collected with the help of interpreters, which, in theory, can influence the participants' interpretations of items in unwanted ways. Finally, it should be noted that the recruitment of participants was difficult, indicating that many eligible participants either declined participation or were not invited to participate. Hence, the sample may be selected in unknown ways. These unknown potential selection effects, in addition to the small sample size, further limit the ability to make any definite claims about the study's external validity. The study, given the heterogeneity of the sample that nonetheless is apparent, still suggests that ITT is both acceptable and effective for refugees with various characteristics.

Conclusion

This study shows that ITT is a viable and acceptable treatment option for refugees who have experienced trauma due to torture, armed conflict, and/or flight. The findings further suggest that ITT is a highly effective method for treating PTSD among refugees in an outpatient setting. These findings should be inter-

preted in relation to the many unique challenges involved when delivering ITT to refugees. However, further studies with larger samples and longer follow-ups that compare ITT to active controls or first-line treatment are needed to corroborate and expand these results. In-depth investigations that in detail explore the ITT treatment process in this context, both from the perspective of the patient and the treating clinician, are warranted. It would provide valuable knowledge to better understand how specific treatment components influence treatment outcomes and when in the process treatment effects can be detected.

Disclosure statements

None of the authors have any potential conflict of interest to report.

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Data availability statement

The data on which this study is based is not readily available due to its private and sensitive nature. The individual scores on the pre- and post-measurements are displayed in the figures included in the manuscript.

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