HTA Austria
Austrian Institute for
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Trauma Care: Teaching Recovery Technique (TRT) to children and adolescent refugees

Systematic Review and Evaluation of Austrian TRT-Programme at AFYA

Final report

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Systematic Review and Evaluation of Austrian TRT-Programme at AFYA

Vienna, June 2025

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List of abbreviations

ADHD……. Attention Deficit Hyperactivity Disorder
AWMF…… Arbeitsgemeinschaft der Wissenschaftlichen Medizinischen Fachgesellschaften
CBT…….. ..... Cognitive Behavioral Therapy
CRIES…… . Children's Revised Impact of Event Scale
DSRS……..…….. Depression Self-Rating Scale for Children
EMDR …… Eye Movement Desensitization and Reprocessing
GHQ…… .... General Health Questionnaire
IES / IES-R……Impact of Event Scale / -Revised
MID…….…….... Minimally Important Difference
NICE…… ... National Institute for Health and Care Excellence
PICO ……..…….....Population, Intervention, Comparator, Outcome
PHQ-8 / 9……..…Patient Health Questionnaire
PTSD……..…….....Posttraumatic Stress Disorder
RCT…….…….... Randomised Controlled Trial
SDQ ……..……..... Strengths and Difficulties Questionnaire
TF-CBT……..……Trauma-Focused Cognitive Behavioral Therapy
TRT ……..……..... Teaching Recovery Techniques
URM ……..……....Unaccompanied Refugee Minor (Unbegleiteter minderjähriger Flüchtling)

Executive Summary

Background and Objective: Traumatic experiences are a predictor of ill mental health, primarily posttraumatic stress disorder (PTSD), depression and anxiety. The prevalence of PTSD is estimated to be around 45%. The Children and War Foundation has developed a group-based trauma-focused cognitive behavioural therapy (TF-CBT) – the Teaching Recovery Techniques (TRT) - for children and adolescents exposed to war, violence, and displacement. TRT is a programme designed for health promotion and prevention in low-resource settings and is facilitated by trained laypersons, often from the same cultural background as the participants.

traumatic experiences: a predictor of ill mental health
Children and War Foundation developed health promotion and prevention programme: Teaching Recovery Techniques (TRT)

This report aims to synthesise the empirical evidence on the effectiveness of TRT programmes in other countries and to put the results of the Austrian TRT programme at AFYA in context.

aim of report: synthesis of evidence on effectiveness and data analysis of the Austrian TRT programme

Method: A systematic review of published studies (RCTs and case series) was conducted based on a systematic search in three databases (Medline via Pubmed, INAHTA, Cochrane Library). Additionally, a descriptive analysis of the data from the Austrian TRT programme at AFYA, operated since 2018 in school settings, was carried out.

method: systematic review, descriptive data analysis

Results: A systematic literature search identified 12 empirical studies: seven randomised controlled trials (RCTs) and five before–after case series, with over 1,800 participants. Across studies, TRT was generally found to reduce PTSD symptoms, with CRIES-8 or CRIES-13 scores improving between 3- and 14 points post-intervention, and up to 12 points at follow-up (3–6 months). Evidence for reductions in psychological distress and depressive symptoms (measured via SDQ and DSRS) was mixed and less consistent. Improvements in well-being (Cantril Ladder) and depression severity (PHQ-9) were observed in some studies. However, the clinical significance is not always clear due to the lack of minimal important difference (MID) thresholds. The risk of bias was low to moderate across studies.

results from 12 studies: 7 RCTs + 5 case series with 1,800 participants

reduction of PTSD symptoms, improving between 3- and 14 points post-intervention

improvements consistent across studies

The analysis of the Austrian TRT programme is based on data from 372 participants, children and adolescents (aged 6–18) with post-traumatic stress disorder (PTSD): CRIES-8 data was collected before and after the intervention from children identified by teachers. The analysis revealed significant reductions in PTSD symptoms post-intervention, especially among unaccompanied minors and children with high baseline scores. The programme demonstrated strong feasibility, cultural adaptability, and acceptability. The average cost per participant was € 678.

results from Austrian data analysis:
also significant reductions in PTSD symptoms post-intervention, esp. among participants with high PTSD baseline scores

Conclusion: This report presents the findings of a systematic review and a national evaluation of the Teaching Recovery Techniques (TRT) programme implemented by AFYA in Vienna/Austria. The results show consistent effects across studies. The evidence supports the TRT programme as an effective and scalable and low cost intervention for reducing trauma symptoms among refugee children and adolescents. Future research should aim to strengthen the evidence base with longer-term outcomes, explore moderators of effect, and enhance inclusion of underrepresented groups such as girls.

consistent results in publications and data analysis: evidence supports the TRT programme as an effective and low-cost intervention

Zusammenfassung

Hintergrund und Zielsetzung: Weltweit sind laut UNHCR Mitte 2024 über 122 Millionen Menschen gewaltsam vertrieben, darunter 43,7 Millionen Flüchtlinge. In Österreich wurden 266.205 Flüchtlinge registriert, hauptsächlich aus Syrien, der Ukraine und Afghanistan. Unter ihnen befinden sich etwa 1.000 unbegleitete minderjährige Asylwerber. Kinder und Jugendliche, insbesondere Geflüchtete, sind besonders vulnerabel gegenüber posttraumatischen Belastungsstörungen (PTBS).

UNHCR: 2024 ca 43,7 Millionen Flüchtlinge

Österreich: 266.205 Flüchtlinge registriert Syrien, Ukraine, Afghanistan

Traumatische Erlebnisse sind ein Prädiktor für psychische Erkrankungen, vor allem für posttraumatische Belastungsstörungen, Depressionen und Angstzustände. Die Prävalenz von PTBS wird auf etwa 45 % geschätzt. Die „Children and War Foundation" entwickelte eine gruppenbasierte traumafokussierte kognitive Verhaltenstherapie (TF-CBT) – die „Teaching Recovery Techniques (TRT) Methode" – für Kinder und Jugendliche, die Krieg, Gewalt und Vertreibung ausgesetzt waren. TRT ist ein Programm zur Gesundheitsförderung und Prävention in ressourcenschwachen Umgebungen und wird von geschulten Laien durchgeführt, die oft denselben kulturellen Hintergrund wie die Teilnehmer*innen haben.

Traumatische Erlebnisse: Prädiktor für psychische Erkrankungen, PTBS

Children and War Foundation entwickelte TF-CBT Methode: Teaching Recovery Techniques (TRT) zur Gesundheitsförderung und Prävention

Dieser Bericht zielt darauf ab, die empirischen Belege für die Wirksamkeit von TRT-Programmen in anderen Ländern zusammenzufassen und die Ergebnisse des österreichischen TRT-Programms bei AFYA in einen Kontext zu stellen.

Bericht: Evidenz zur Wirksamkeit von TRT

Methode: Es wurde eine systematische Übersicht zu veröffentlichten Studien (RCTs und Fallserien) auf der Grundlage einer systematischen Suche in drei Datenbanken (Medline via Pubmed, INAHTA, Cochrane Library) durchgeführt. Die Datenextraktion und die Einschätzung des Verzerrungsrisikos wurden von nur einer Wissenschafterin durchgeführt.

Methode: systematische Übersicht

Zusätzlich wurde eine deskriptive Analyse der Daten aus dem österreichischen TRT-Programm AFYA durchgeführt, das seit 2018 von AFYA in Schulen angeboten wird.

Analyse österreichischer Daten zu TRT in AFYA

Ergebnisse: Eine systematische Literaturrecherche ergab 12 empirische Studien: sieben randomisierte kontrollierte Studien (RCTs) und fünf Vorher-Nachher-Fallserien mit insgesamt über 1.800 Teilnehmer*innen. In allen Studien wurde festgestellt, dass TRT im Allgemeinen die PTBS-Symptome reduzierte, wobei sich die CRIES-8- oder CRIES-13-Werte nach der Intervention um 3 bis 14 Punkte und bei der Nachuntersuchung (3–6 Monate) um bis zu 12 Punkte verbesserten. Die Belege für eine Verringerung der psychischen Belastung und der depressiven Symptome (gemessen mit SDQ und DSRS) waren gemischt und weniger konsistent. In einigen Studien wurden Verbesserungen des Wohlbefindens (Cantril Ladder) und des Schweregrads der Depression (PHQ-9) beobachtet, allerdings ist die klinische Relevanz aufgrund fehlender Schwellenwerte für die minimale wichtige Differenz (MID) nicht immer klar. Das Risiko für Bias war in allen Studien gering bis moderat.

Ergebnisse: systematische Übersicht von 12 Studien (7 RCTs + 5 Fallserien) mit 1.800 Teilnehmer*innen

konsistente Ergebnisse: Reduktion der PTBS-Symptomatik um 3-14 Punkte

Zwischen 2018 und 2024 wurde insgesamt mit 1.426 Kindern und Jugendlichen (im Alter von 6 bis 18 Jahren) in 176 TRT-Gruppen gearbeitet. Die Analyse des österreichischen TRT-Programms basiert auf Daten von 372 Teilnehmenden, Kindern und Jugendlichen (im Alter von 6 bis 18 Jahren) mit posttraumatischer Belastungsstörung (PTBS): CRIES-8-Daten wurden vor und nach der Intervention von Kindern erhoben, die von Lehrern als belastet identifiziert wurden. Die Analyse ergab eine signifikante Verringerung der PTBS-Symptome nach der Intervention, insbesondere bei unbegleiteten Minderjährigen und Kindern mit hohen Ausgangswerten. Das Programm zeigte eine gute Durchführbarkeit, kulturelle Anpassungsfähigkeit und Akzeptanz bei den Teilnehmenden. Die durchschnittlichen Kosten pro Teilnehmer*in beliefen sich auf 678 € im Jahr 2024.

2018-2024: 1.426 KiJu in 176 TRT-Gruppen in Ö

Analyse österreichischer Daten von 372 Teilnehmer*innen ebenfalls Verringerung der PTBS-Symptome nach der Intervention

Kosten je Teilnehmer*in: € 678 in 2024

Diskussion: Dieser Bericht präsentiert die Ergebnisse einer systematischen Übersicht von Publikationen und einer nationalen Evaluation des von AFYA in Wien/Österreich durchgeführten Programms „Teaching Recovery Techniques“ (TRT). Die Ergebnisse zeigen konsistente Wirkungen über alle Studien hinweg. Es müssen aber auch auf die Limitationen der Arbeit hingewiesen werden: Es wurde nur englischsprachige Literatur einbezogen; der Fokus lag ausschließlich auf TRT und andere, ähnliche Programme fanden keine Berücksichtigung; in vielen Studien gab es hohe Dropout-Raten und kurze Nachbeobachtungszeiträume.

Zusammenfassung der Ergebnisse aus Publikationen und österreichischen Daten: durchwegs einheitliche Ergebnisse

Fazit: Die Erkenntnisse stützen das TRT-Programm als wirksame, skalierbare und kostengünstige Intervention zur Verringerung von Traumasymptomen bei Flüchtlingskindern und -jugendlichen. Zukünftige Forschungsarbeiten sollten darauf abzielen, die Evidenzbasis mit längerfristigen Ergebnissen zu stärken, Modifikatoren der Wirkung zu untersuchen und die Einbeziehung unterrepräsentierter Gruppen wie Mädchen zu verbessern.

TRT-Programm ist wirksame, skalierbare und kostengünstige Intervention

1 Introduction

1.1 Background

According to the Office of the United Nations High Commissioner for Refugees (UNHCR) in 2024, 122.6 million people are forcibly displaced worldwide due to war, persecution, violence and human rights violations (see Figure 1-1). As a result, 1 in 67 people worldwide are forcibly displaced, 71 per cent of them in low- and middle-income countries [1]. For more than 12 years, the number of people remaining forcibly displaced has continued to grow. The main drivers of forced displacement are conflicts and war, such as in the Ukraine and in Syria.

UNHCR: 122,6 Millionen Vertriebene weltweit

Most people who are forced to flee never cross an international border, remaining displaced within their own countries. Known as internally displaced people (IDPs), they accounted for nearly 3 in 5 of all forcibly displaced people. The global refugee population reached 43.7 million by mid-2024 [1].

davon bleiben 3 von 5 im eigenen Land, 43,7 Millionen globale Flüchtlinge

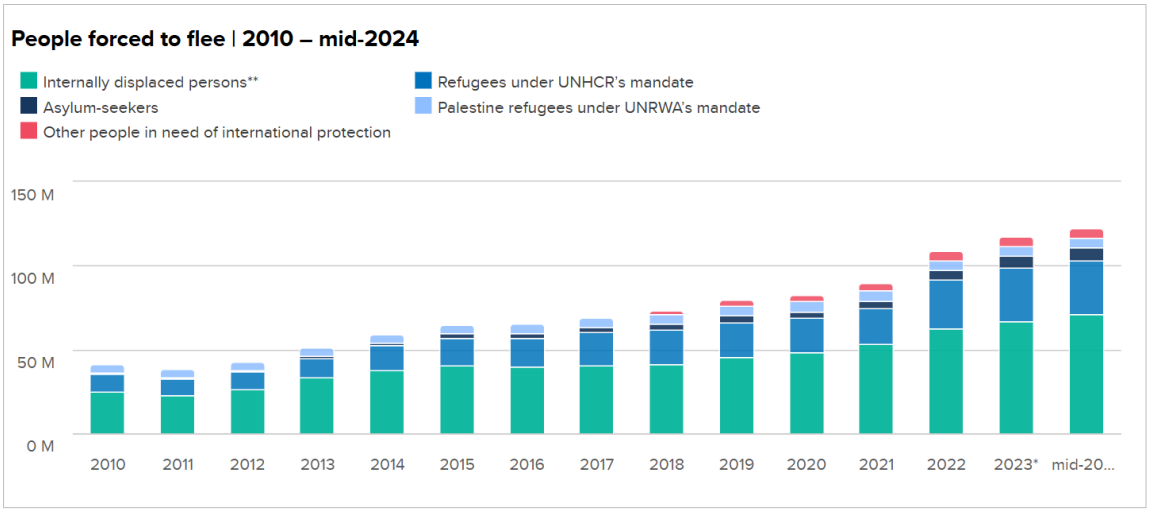


Figure 1-1: Evolvement of displaced people 2010 to mid 2024 (https://www.unhcr.org/mid-year-trends)

By mid-2024, 266,205 refugees were registered in Austria [2], of which …came

- 97,939 from Syria,
- 77,150 from Ukraine
- 42,875 from Afghanistan

in Österreich (Juni 2024): 266.205 Flüchtlinge registriert: Syrien, Ukraine, Afghanistan

In 2024, in Austria 32,257 asylum applications (12% of registered refugees) were submitted. Syria was the most common country of origin for asylum seekers (14,987), followed by Afghanistan (4,416) and Türkiye (4,238). Of these, a total of around 483 unaccompanied refugee minors (URM) from Syria applied for asylum in Austria, followed by Afghanistan with around 300.

davon stellten 2024 nur 12% Asylantrag

ca 1.000 unbegleitete Minderjährige Asylbewerber*innen

In 2022 112,272 asylum applications were submitted in Austria of which 21,985 were recognized; in 2023, 27,312 asylum applications were recognized and in 2024 26,273 [2, 3].

ca 22.000 bis 27.000 Asylanerkennung pro Jahr

1.2 Epidemiology

hohe Prävalenz bei psychischen Beeinträchtigungen: Depression, Angst, PTBS

Traumatic experiences are a predictor of ill mental health, primarily post-traumatic stress disorder (PTSD), depression and anxiety [4]. The prevalence of PTSD, depression and anxiety due to refuge and displacement enforced by multi-traumatic events such as terror attacks, combat experiences, torture, rape or natural disasters is an estimate of 42% (ranges from 30% to 54%), for anxiety 43% (31% to 57%), for stress 22% (11% to 39%), 45% for PTSD (36% to 53%) [4, 5] with higher prevalences among children and unaccompanied refugee minors up to 85% [6].

Prädiktoren: Schwere der erlebten Traumata, Dauer und Gewalterlebnisse in Aufnahmelagern, Unsicherheit zu Status

Predictors and reasons for common mental disorders are the severity of the traumata, the time spent in refugee camps, violence, uncertainty of the outcome of migration, legal status and post-migration living situation [7, 8]. Therefore, early screening [9] and assessments of the risks for mental health problems that influence adaptation and general health, followed by preventive interventions, are key [8]. However, access to healthcare for migrants is heterogeneous, even if increasing attention is paid to mental healthcare [10]. Especially children and adolescent refugees can thrive most if offered preventive mental health interventions. Trauma-focused cognitive behavioural therapies (TF-CBT) have been the interventions of choice in recent years [6]. These have been developed since the 1980s to support adults. Later, the Children and War Foundation [11], established during the civil war in former Yugoslavia in the mid-1990s, focused on TF-CBT for children and adolescents.

frühzeitige Trauma-Therapien, insb. bei Kindern und Jugendlichen

1.3 Clinical and Practice Guidelines

systematische Übersicht zu 14 Leitlinien: CBT + EMDR

A systematic review of guidelines recommending interventions for post-traumatic stress disorder (PTSD) identified 14 guidelines [10]: all but one guideline recommended cognitive behavioural therapies (CBT) in various forms as first-line therapy, sometimes in combination with Eye Movement Desensitisation and Reprocessing (EMDR) [12].

AWMF 2019, NICE 2018 TF-CBT für 7-17 Jährige in Gruppen

To mention only two guidelines (AWMF 2019 [13], NICE 2018 [14]) especially focus on diagnosis (trauma-anamnesis), promotion, prevention and early intervention (manualized group TF-CBT for 7 to 17 years of age [14]) and therapy based on trauma-focused cognitive behavioural therapies (individual CBT) are recommended. The main differences between the TF-CBTs are the dosis, the emphasis and implementation of exposure-oriented vs. cognitive techniques, the proportion of parental involvement and in relation to the assumed mechanisms of action (memory changes, cognitive restructuring, habituation) [13].

1.4 Interventions in children and adolescents

1.4.1 Overview of Interventions

unterschiedliche Interventionen entwickelt

Several interventions for the prevention of mental disorders and for the promotion of mental health have been developed for children and adolescent refugees [15] (see Table 1-1):

Table 1-1: Interventions to promote mental health in refugees [15] (examples only)

Family Strengthening Intervention for Refugees (FSI-R)	FSI-R is a strengths-based intervention whose core components include a family narrative that draws out family challenges, strengths, and collective future hopes that can be achieved through improved communication. The FSI-R intervention consists in approximately ten 90-minutes weekly home-visiting sessions provided by well-trained interventionists from the refugee community.
Teaching Recovery Techniques (TRT)	TRT is an evidence-based manualized intervention with a clear protocol and step-by-step practical workbook, directed to children aged 8 and older in conflict and displacement settings. It teaches skills and techniques helpful in coping with the effects of war and violence on mental health, in order to reduce the need for later treatment. See details below.
FIRST STEPS	FIRST STEPS is a psychoanalytically-oriented prevention program for immigrant families, focuses on the specific challenges and needs of families to optimize the early developmental environment of children at risk of growing up disadvantaged due to their parents' acute migration.
Entre Dos Mundos	Entre Dos Mundos is an 8-week prevention program that uses a multifamily group in weekly sessions to discuss acculturation stressors and challenges. Each session is devoted to a theme that has been empirically linked to acculturation stress.
FRIENDS for anxiety and depression	The FRIENDS program is an internationally recognized early intervention program for children and adolescents to promote personal development skills, such as building self-esteem, problem-solving and self-expression of ideas and beliefs. It is meant to teach children and adolescents how to cope with and manage anxiety and depression to prevent the development of severe mental disorders, impairment in social functioning and emotional distress.
SHIFA (Supporting the Health of Immigrant Families and Adolescents)	SHIFA is a school and community-based multi-tiered program. In this model, broad-based prevention and community resilience building is provided to the population of interest, more targeted prevention and stress-reduction interventions are provided to identified at-risk groups.
Group-crisis intervention during ongoing conflict	This intervention was thought for children and adolescents with mild to severe symptoms of PTSD, living in the Gaza Strip. The treatment protocol was adjusted to the nature of trauma, sociocultural circumstances, and children's developmental ability, by using free drawing, talking about their traumatic experiences, and feelings, writing about traumatic events, storytelling, games, and role-plays related to the conflict.

Teaching Recovery Techniques (TRT) Programm mit viel empirischer Evidenz

The TF-CBT program TRT will be described in more detail in the following section. So far, TRT is the program with the best empirical evidence and was chosen by the Austrian AFYA as the intervention of choice.

1.4.2 Teaching Recovery Techniques (TRT)

Teaching Recovery Techniques (TRT) is a group intervention for children and adolescent refugees developed by the Children and War Foundation in Norway and the United Kingdom [11, 16]. TRT is a manualised intervention based on trauma-focused cognitive behavioural therapy (TF-CBT). The TRT manual aims at teaching children who have been affected by potentially traumatic experiences like war, displacement, or natural disasters, techniques and skills to cope with the psychological effects of these disastrous events. The intervention aims to increase coping and promote mental health, but is not meant to treat children with a diagnosis of post-traumatic stress disorder (PTSD).

von Children and War Foundation entwickelt: Trauma-fokussierte kognitive Verhaltenstherapie zu Gesundheitsförderung und Prävention

TRT was explicitly developed for use in low-resource settings, where many children needed support [17]. Each TRT group is facilitated by native speakers, who have been trained and educated for this task. They do not need therapeutic training, but some experience working with children or youth. The (weekly) group sessions focus on psychoeducation and strategies to reduce trauma symptoms. The techniques are expected to be delivered in the order they appear in the manual; however, the manual leaves room for some flexibility (see Table 1-2). Often, an initial "getting to know each other session" and a "follow-up session" are offered. Additionally, the program includes sessions for the children's caregivers, which focus on psychoeducation and how they can support the child [17].

in Gruppen angeboten wöchentliche Sitzungen a 1-2 Stunden

durchgeführt von Moderator*innen – oft aus dem eigenen Kulturraum

The TRT comprises five to seven sessions (see Table 3-1) on the three main PTSD-symptoms: hyperarousal, avoidance and intrusive memories. The sessions include affective modulation skills, cognitive coping and processing (i.e. recognising the interrelation between thoughts, feelings, and behaviors and offering ways to change inaccurate and unhelpful thoughts), promoting better affective regulation, trauma narrative (helps children to correct their cognitive distortions about these experiences, and reduces their negative impact), mastery of trauma reminders and enhancing resilience and safety [18-20]. TRT enables normalization of reactions to trauma, offers participants emotional support when exposing themselves to avoided thoughts and situations [19]. TRT is taught in one to two hours per week over a period of around 2 months, in groups of up to 15 participants [18, 21]. The facilitators use either native language of the refugees or are bi-lingual. The children and adolescents are also encouraged to practice the techniques between the weekly sessions.

5-7 Sessions davon 3 zu PTBS-Symptomen:

Hyperaktivität, Vermeidung und belastende Erinnerungen

TRT-Handbuch

Table 1-2: Content of the Teaching recovery techniques (TRT) programme *[17]*

Theme	Techniques
Intrusion	Psychoeducation: trauma events and reactions Normalization of traumatic stress reactions Establishing a safe place Imaginary techniques
Intrusion	Dual attention tasks (EMDR-inspired) Dream work Time for bothering thoughts and worries Psychoeducation: Arousal Muscle relaxation
Arousal	Positive self-talk The "fear thermometer" Sleep and activity planning Psychoeducation: Reminders and avoidance
Avoidance	Mapping own reminders Introducing graded exposure Exposure to traumatic memories (drawing, writing, talking)
Avoidance	Look to the future

1.5 Objectives and Research Questions

This report is intended to answer the following questions:

1. Is Teaching Recovery Technique (TRT) as group-based manualized TF-CBT in comparison to waiting lists or no intervention in children and adolescents more effective and safe concerning PTSD, depression and anxiety outcomes?
2. How are the results of the Austrian TRT program at AFYA concerning descriptive data (number of interventions, age groups, etc.) and effectiveness analysis?

Bericht hat
2 Forschungsfragen:

Übersicht zur Wirksamkeit von TRT

Ergebnisse des österr. TRT-Programms in AFYA

2 Methods

2.1 Methods for Systematic Review

To answer the first research question

PIKO-Frage

- Is Teaching Recovery Technique (TRT), as group-based manualised TF-CBT, in comparison to waiting lists or no intervention, in children and adolescents, more effective and safe concerning PTSD, depression and anxiety outcomes?

a systematic search for empirical studies and a synthesis of the evidence is conducted.

2.1.1 PICO and Inclusion criteria

Inclusion criteria for relevant studies are summarized in Table 2-1.

Einschlusskriterien für relevante Studien

Table 2-1: Inclusion criteria

Population	Refugees (forcibly displaced): Children and adolescents 6-18 years with PTSD ≥ 17 on CRIES or similar scoring (WTQ). Forcibly displaced ■ within the country/ internally displaced (e.g. Palestine) ■ across borders/ displaced to a different culture (e.g. Syria) Intended use of intervention: health promotion and prevention [ICD-10 code: F43.10/ Post-traumatic stress disorder, unspecified; MeSH-term: Trauma and Stress-Related Disorders, Mental Disorders]
Intervention	Teaching Recovery Technique (TRT) as group-based manualised trauma-focused cognitive behavioral therapy (TF-CBT) TRT delivered in groups by (lay, native) facilitators, in 5 to 8 sessions based on TRT-manual [ICD-10 code: F43.1/ Post-traumatic stress disorder, unspecified; MeSH term: Stress Disorders, Post-Traumatic]
Control	Usual care: waiting lists or no intervention
Outcomes	

Efficacy	Critical endpoints for PTSD:
	■ Post-Traumatic Stress Disorder (PTSD):
	  ■ Child Revised Impact of Events Scale (CRIES-8, CRIES-13)
	  ■ Impact of Event Scale (IES, IES-R)
	
	Further endpoints for co-morbidities:
	■ *Psychological distress:*
	  ■ Strengths and Difficulties Questionnaire (SDQ)
	■ *Depressive symptoms:*
	  ■ Depression Self-Rating Scale for Children (DSRS)
	■ *Psychological disorders:*
	  ■ General Health Questionnaire (GHQ-12)
	■ *Life satisfaction and well-being:*
	  ■ Cantril Ladder

	■ *Severity of depression:* ■ Patient Health Questionnaire (PHQ-8 or PHQ-9) [Rationale for choosing the outcomes: While PTSD measured with CRIES is the endpoint most often used in TRT-studies, other instruments aim at measuring co-morbidities such as depression and anxiety]
Safety	Any outcomes reported
Study design	Randomised controlled trials (RCTs) Cluster RCTs Prospective and retrospective case series (pre-post: at least 2 time points)

Exclusion criteria:

- studies on TRT in children and adolescents in other settings and other than war trauma (e.g. tsunami).

2.1.2 Systematic literature search

systematische Literatursuche in 3 Datenbanken

The systematic literature search was conducted on the 01. 02. 2025 in the following databases:

- Medline via Pubmed
- The Cochrane Library
- INAHTA-Database

The systematic search was not limited, neither in publication dates, nor to type of studies, but to articles published in English or German only. Overall, 28 citations were identified (23 in the systematic search and five in reference lists and hand search, see Appendix).

2.1.3 Flow chart of study selection

Literaturauswahl

Overall, 28 hits were identified. The citations were screened in full-text by one researcher (CW) and were included in the evidence synthesis of empirical studies (n=12) or for background materials. The selection process is displayed in Figure 2-1.

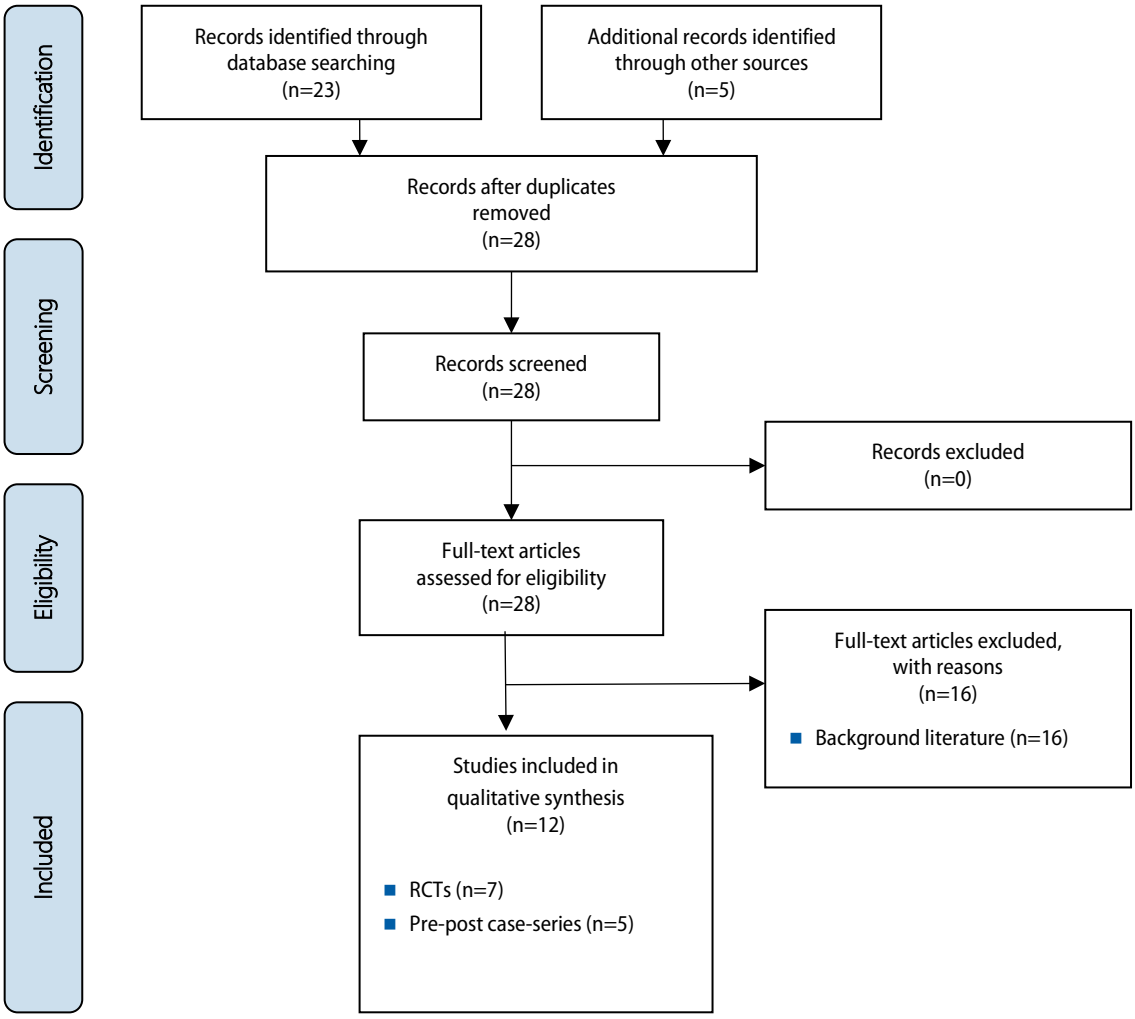


Figure 2-1: Flow chart of study selection (PRISMA Flow Diagram)

2.1.4 Analysis and Synthesis

Datenextraktion und Verzerrungsrisiko

One reviewer (CW) systematically extracted relevant data from the included studies into data extraction tables designed and tested *a priori*. Also, the Risk of bias (RoB) appraisal was conducted by the same researcher.

RCTs: Cochrane RoB2

Certainty was assessed using the Cochrane Risk of Bias (RoB2) tool for RCTs [22] on the study level, and the IHE checklist for Risk of bias for case series [23], also on the study level (see Table A - 1 and Table A - 2).

Fallserien: IHE checklist

Overall RoB for single-arm case series were estimated using a predefined point score (range: 0 – 20; Table 2-2): a high score indicates a low RoB and a low score indicates a higher RoB. Detailed thresholds are presented in Table 2-3.

Table 2-2: Overall risk of bias (RoB) point scores for RoB assessment of case series

Answers to specific questions of the IHE-20 checklist	Points
No	0
Partial	0.5
Unclear	0.5
Yes	1

Table 2-3: Cut-*off criteria for the risk of bias (RoB) assessment of overall RoB of case series*

Criteria	Points
Low risk	>18
Moderate risk	14.5 to 18
High risk	≤14

Results were summarised in Table 3-1 and Table 3-2 and the results were reported qualitatively.

narrative Berichterstattung der Ergebnisse

2.2 Methods for Evaluation of TRT at AFYA

To answer the second research question on

- How are the results of the Austrian TRT program at AFYA concerning descriptive data (number of interventions, age groups, etc.) and effectiveness analysis?

the following methods are applied:

2.2.1 Recruitment and collection of data

AFYA started in 2018 and collected data from its beginning with measuring PTSD with CRIES-8 before and after the TRT interventions. The TRT programme is requested through schools (or exceptionally refugee homes). Teachers or social workers identify a need regarding post-traumatic stress. Inclusion criteria for the TRT programme at schools are "children who experienced war and flight". Parents are invited to information sessions at the start of the programme or are contacted by telephone or through written information. Children under 15 years can only participate if their parents have provided informed consent. Children from 15 years of age can provide consent themselves. TRT Facilitators (AFYA staff) provide information about the programme during the first of eight meetings and re-check for consent (even if parents have already provided).

Beginn von AFYA 2018
Schulen können TRT-Programm anfordern

Identifikation von Schülern durch Lehrer*innen und Sozialarbeiter*innen

Eltern werden informiert und müssen Zustimmung für Kinder < 15 Jahre geben

2.2.3 Data management

CRIES-8: Datenerhebung und Check der Vollständigkeit durch TRT-Facilitators

TRT Facilitators conduct the CRIES-8 Test in their second meeting with the group. They ensure they can identify the pre- and post-test for each participant with the respective date, without noting the full names.

Datenmanager führt Analyse durch und verwahrt Daten an sicherem Platz

The post-intervention test is filled out during the last session. Facilitators conduct a first analysis, check for validity and hand over all CRIES Tests to the AFYA data manager. The data manager completes the final analysis and enters the results in the project database. She ensures all CRIES tests are stored securely and compliant with data protection regulations. The test results (on paper) are only accessible to the data management team. Digital data is stored in a database with a backup system.

Zugang zu den Daten nur für Datenmanagement Team

Incomplete or invalid tests are destroyed.

anonymisiertes Feedback an Schulen

Feedback on findings is given to participating schools and partner organisations. However, feedback to individual participants is not given as no contact details are available.

2.2.4 Validation of data

Validierung der Fragebögen: Konsistenz der Daten

The CRIES (Child Revised Impact of Events Scale) measurement instrument variables were checked for data consistency and corrected after an inconsistency was discovered in one case before the analysis. Some characteristics were recorded for the analysis, and new variables were calculated. These include:

Variablen und Ausprägungen: z.B. Alter – 3 Kategorien

- Age recorded: Age recorded into three categories
- Country of origin recorded: Countries smaller than n < 30 combined into one category
- Length of stay: Calculated from the year of arrival and the year of the first CRIES survey
- Length of stay recorded: Recorded into three categories
- Number of trainers
- Difference Intrusion: Difference between the first and second CRIES measurement
- Difference Aversion: Difference between the first and second CRIES measurement
- Difference CRIES: Difference between the first and second CRIES measurement
- PTSD_Before: Categorisation of participants into groups with PTSD (first CRIES score ≥ 17) and groups without PTSD (first CRIES score < 17)
- PTSD_After: Categorisation of participants into groups with PTSD (second CRIES score ≥ 17) and groups without PTSD (second CRIES score < 17)

2.2.6 Analysis and Synthesis of Data

The data are presented as follows:

- Detailed description of the sample (Gender, Age, Country of origin, Duration of stay, Location of the training program).
- CRIES-scores and PTSD at baseline by groups (for Unaccompanied minors refugees, by Gender, Age, Country of origin, Further features).
- CRIES-Scores after the TRT training by groups and
  - Outlier analysis
  - Results and effect size: full sample and in groups
  - Overview of changes in CRIES scores

Datenanalyse: Beschreibung des Samples nach Merkmalsausprägungen

Baseline-Werte von CRIES
CRIES-Werte nach TRT-Training
Ausreißeranalyse

3 Results of publication on TRT-effectiveness (and safety)

3.1 Outcomes and Frequency of Use of Outcome Instruments

A multitude of trauma measurements exists [24]. However, not all of them are equally often applied in empirical studies. Only those used at least twice in the identified studies will be reported. Further outcome measures can be found in Appendix A.

Vielzahl an Messinstrumenten: hier nur jene berichtet, die zumindest 2x in Studien verwendet wurden

3.1.1 Outcomes

Impact of Event Scale (IES, IES-R) and Child Revised Impact of Events Scale (CRIES-8, CRIES-13)

bereits 1979: IES entwickelt
Vorgänger von CRIES (Children's Revised Impact of Event Scale): CRIES-8, CRIES-13 am häufigsten in den Studien verwendet

The Impact of Event Scale (IES) was originally developed by Horowitz et al. (1979) [25] to monitor the main phenomena of re-experiencing a traumatic event and avoidance of that event and the feelings it gave rise to. Hence, this 15-item, four-point scale has two subscales of Intrusion and Avoidance. It was *not* initially designed for children, but it has been used in several studies with children aged 8 years and older. These studies found that children misinterpret some items. Therefore, a shortened version – the (CR)IES-8 for children- was developed.

für Kinder und Jugendliche mit PTBS

The Children's Revised Impact of Event Scale (CRIES) is a brief child-friendly measure designed to screen children at risk for Post-Traumatic Stress Disorder (PTSD), developed by the Children and War Foundation [26]. The tool is designed for use with children aged 8 years and above who can read independently. It consists of 4 items measuring Intrusion, four items measuring Avoidance and five items measuring Arousal – hence it is called the CRIES-13.

4 Items zur Messung von Intrusion,
4 Items zu Vermeidung,
5 Items zu Erregbarkeit

Both an 8-item (lacks Arousal item) and a 13-item version exist, and as the CRIES-8 performs equally well, it is recommended over CRIES-13 as a screening tool. Eight items are scored on a four-point scale: Not at all, Rarely, Sometimes, Often. There are three sub-scales: Intrusion, Avoidance, and Arousal.

Kultur-unabhängig, aber Kritik, dass Skalen selbst auszufüllen sind

Despite the criticisms of using such self-completed scales in different cultures, the IES has been applied in various cultures, including studies with children. It is now clear that posttraumatic stress symptoms in children are more similar across cultures than they are different. For screening purposes, it is recommended that the results from the Intrusion and Avoidance scales be used only.

CRIES-13 (0 and 65 Punkte): ≥ 17 Wahrscheinlichkeit für PTBS
kein MID

The IES-R yields a total score between 0 and 88. If the sum of the score is ≥ 24 a diagnosis of PTSD is likely. A change of 13.1 points is assumed to be clinically relevant [21].

The CRIES-13 yields a total score between 0 and 65. If the sum of the scores is ≥ 17, the probability is very high that that child will obtain a diagnosis of PTSD [27].

No minimally important difference (MID) is reported for CRIES [27].

The Strengths and Difficulties Questionnaire (SDQ)

Psychological distress, i.e., internalising and externalising problems, is measured with the self-report version of the SDQ. The SDQ is a 25-item measure of child emotional and behavioural difficulties. Individual items (eg, often has temper tantrums or hot tempers in the parent version and I get very angry in the child version) are rated according to how true the statement is for the child (Not True, Somewhat True, Certainly True). The 25 items are divided between five scales: emotional symptoms (five items), conduct problems (five items), hyperactivity/inattention (five items), peer relationship problems (five items), and prosocial behaviour (five items) and are rated 0-2. Total scores are generated from 20 items taken from the first four subscales and range from 0 to 40, with a higher score indicating more emotional and behavioural difficulties [20, 27-30].

SDQ (Strengths and Difficulties Questionnaire) misst psychischen Stress

25 Items in 5 Bereichen: emotionale Symptome, Verhaltensauffälligkeiten, Hyperaktivität & Unaufmerksamkeit, Beziehungsprobleme mit Gleichaltrigen, soziales Verhalten

Different methods yield varying MIC thresholds. Predictive modelling provided the most precise anchor-based minimally important differences (MID): -1.7 points (95% CI -2.2, -1.2) for the SDQ, indicating that score improvements of 8% for the SDQ may be perceived as 'important' by youths [31].

MID: -1,7 Punkte

The Depression Self-Rating Scale for Children (DSRS)

The DSRS is an 18-item questionnaire measuring depressive symptoms in children. Children are asked to judge whether each statement applied to them over the previous week and then estimate on a three-point scale whether it is true (Sometimes, Never or Most of the time). Higher scores indicate a higher level of depressive mood [30, 32]. Children who scored 15 and above on the DSRS were significantly more likely to be given a psychiatric diagnosis of Major Depression.

DSRS (Depression Self-Rating Scale for Children)

18 Items zu depressiven Symptomen

kein MID

No MID could be identified.

General Health Questionnaire (GHQ)

The GHQ-12 assesses psychological disorders with a total score between 0 and 36. Severe mental illness is considered to be ≥25 and was an exclusion criterion, and referred to individualised therapy.

GHQ (General Health Questionnaire, 0-36 Punkte) misst psychische Beeinträchtigungen

kein MID

No MID could be identified.

Cantril Ladder

Life satisfaction and well-being is measured by the Cantril Ladder. The scale is visualised as a ladder, where the top of the ladder represents the best possible life for the participants, and the bottom represents the worst possible life. The Cantril Ladder was validated in several studies, such as the HBSC study. A 1–10 scale version of the Cantril Ladder is transformed to scores 0–10. A score of 4 or below indicates 'suffering' and 7 or above 'thriving'. The scale validly measures general psychosocial health among children/youth ages 10 to 17 years [27, 28, 33, 34].

Cantril Ladder
Skala zu Messung von Lebenszufriedenheit und Wohlbefinden (0-10)

kein MID

No MID could be identified.

Patient Health Questionnaire (PHQ)

The PHQ-9 is a 9-item instrument for screening, diagnosing, monitoring and measuring the severity of depression. Individual items (e.g., little interest or pleasure in doing things) are rated according to the frequency of their occurrence during the past 2 weeks (Not at all, Several days, More than half the days, Nearly every day). Total scores on the scale range from 0 to 27, with cut-off scores of 5, 10, 15 and 20 for mild, moderate, moderately severe and severe symptoms, respectively. PHQ-9 has also shown responsiveness in measuring treatment outcomes, and a score change of 5 has been suggested to reflect a clinically relevant change [27, 28, 33, 34].

PHQ (Patient Health Questionnaire, 0-27 Punkte)

9-Items zu depressiven Symptomen

MID estimates depended on baseline severity and ranged from no change for very mild up to 14 points (52%) on the PHQ–9 for very high severity. The average MID estimates were 3.7 points (23%) for the PHQ–9 [35].

MID ggf bei -3,7 Punkten (abhängig von Schwere der Depression)

3.1.2 Frequency of use of outcome instruments

CRIES-8 or -13, IES-R were the instruments most often used:

- Four studies (1 RCT, 3 before-after studies) used CRIES-8, further four studies (all RCTs) used CRIES-13 and two studies (1 RCT, 1 before-after study) used IES-R.

SDQ and **DSRS** were used in four (SDQ)and five (DSRS) studies each:

- **SDQ** (3 RCTs, 1 before-after study)
- **DSRS** (4 RCTs, 1 before-after study)

GHQ-12, the **Cantril Ladder** and **PHQ-8 or PHQ-9** was used in two studies each:

- **GHQ-12** (2 RCTs)
- the **Cantril Ladder** (1 RCT, 1 before-after study)
- **PHQ-9 or PHQ-15** (2 RCTs)

DSSYR (RCT), **CYRM** (1 RCT), **GAD-7** (RCT), GSE (1 RCT), **MADRS-S** (before-after study), **A-DES** (RCT), **CATS-S and CATS-C** (RCT), **CPTCI-S** (RCT), **SCARED** (RCT), **CPSS-I** (RCT), and **RCMAS** (1 before-after study) were used once only each (see description of instruments in Appendix A).

Häufigkeit der Anwendung der Instrumente in den Studien

CRIES: 8 x
SDQ: 4 x
DSRS: 5 x
GHQ: 2x
Cantril Ladder: 2x
PHQ: 2x

weitere Messinstrumente nur jeweils 1 x verwendet (Beschreibung im Appendix)

3.2 Study Designs and Study Populations

12 Studien identifiziert zu TRT bei KiJu: 7 RCTs mit 511 in TRT Gruppe und 5 Fallserien mit 1.370 Teilnehmer*innen

Twelve published empirical studies reporting on TRT in young refugees were identified (see Table 3-1):

- Seven randomised clinical trials (RCTs, encompassing 1,032 participants: 511 in the TRT intervention groups and 521 in the control groups) and
- Five before-after studies (encompassing 1,370 participants)

2 Studien geplant/ laufend, 1 abgebrochen

Three further studies are planned, ongoing or discontinued and their protocols are published.

Studienorte und Finanzierung

Three were conducted in Sweden, two in Norway, and two in Palestine; one each in Ukraine, Germany, Australia, Lebanon, and the UK. Two RCTs are ongoing in Wales and Finland; one was discontinued in Sweden.

All studies were sponsored by public research or charitable institutions (Norwegian Research Council, Finnish Academy of Science, Economic and Social Research Council, EU-Horizon 2020, Kavli Trust, Children and War Foundation, etc.).

nur KiJu eingeschlossen mit ≥ 17 Punkten in CRIES (Wahrscheinlichkeit von PTBS), 7-23 Jahre

After screening, only participants with ≥ 17 points in CRIES (likely to be affected by PTSD) or equivalent screening tools (WTQ) were selected for the TRT programs. The participants ranged between 7 and 23 years of age (with only a few older participants), and the majority (≥50%) were male: in recent studies, often unaccompanied refugees (URM).

TRT in Schulen oder in kommunalen Zentren: 4-8 Session in Kleingruppen

The settings of the TRT programs were either in schools or community centres: all participants received between four and eight TRT sessions (lasting 60 to 150 minutes each) in groups of ≥ 15 peers.

Ergebnismessung: zu 2-3 Zeitpunkten

The outcomes were measured two to three points with a follow-up of two to six months. All studies had a high number of lost-to-follow-up participants at different times from baseline to different time-points of follow-up.

Verzerrungsrisiko RCTs: gering oder moderat

Verzerrungsrisiko Fallserien: moderat

The Risk of Bias in the seven RCTs was rated with “some concern”, mostly due to the subjectivity of outcome measurement (self-reported) and the lack of blinding (of the assessors). However, there were few deviations from intended interventions and no selection of reported results. Therefore, the overall risk of bias in the RCTs was rated as “low to some concern”. The Risk of Bias in the five case-series was moderate (14.5 to 17 points) due to lack of blinding of assessors, a lack of description of additional interventions (co-interventions), only partial description of the characteristics of the patients included in the study and short follow-up monitoring. In the case series a high number of losses to follow-up were reported, contributing additionally to a risk of bias.

Table 3-1: Identified studies on TRT (n=12)

Published Studies					
Authors	Country	Population	Study design	Intervention	Instruments
Yavna 2024 [36]	Ukraine	7-23 y, 35% male (n=1798 C/A)	Before-after study (2 time points)	4-6 x TRT-session of 90 min for 4-6 participants, online or f-t-f	CRIES-8
Solhaug 2023 [18]	Norway	Mean 16.61±1.8 y, 88% male URM (n=147, Pop of CASaRM study)	Before-after study (3 time points)	5 x TRT-sessions of 60-120 min for 5-15 participants	CRIES-8 Cantril Ladder
Hasha 2019 [21] Hasha 2022 [37]	Norway	I: 33±10.4 vs C: 33±10.7 y, I: 68% vs. C: 58% male, (n=76, I: 38 vs C: 38)	Randomized Controlled Trial (3 time points)	6 TRT sessions of 150 min for up to 15 participants	IES-R GHQ-12
Durbeej 2024 [38] Durbeej 2021 [28]	Sweden	15.5 (±3) y, 53% male (n=55)	Cluster Randomised Controlled Trial turned into a before-after feasibility study (3 time points)	7 TRT sessions of 90-120 min for 12-16 participants	CRIES-8 GHQ-12 SDQ DSSYR CYRM
Sarkadi 2020 [33] Rondung 2022 [34]	Sweden	Ø 17.73 y, 86.7% male URM (n=15, Pop of SUPpORT)	Pilot-Randomised Controlled Trial (3 time points)	5 x TRT sessions of 120 min in groups	CRIES-13 PHQ-9 GAD-7 GSE Cantril Ladder
Sarkadi 2018 [19]	Sweden	Ø 16.1 y, 93.5% male URM (n=46)	Before-after study (3 time points)	5 x TRT sessions of 90-120 min in groups	CRIES-8 MADRS-S
Barron 2016 [39]	Palestine	Ø 13.6 y, 40.3% male (n=154)	Randomized Controlled Trial (2 time points)	5 x TRT sessions of 90-120 min in groups	CRIES-13 DSRS ADES
Qouta 2012 [40] Diab 2015 [41] Kangaslampi 2016 [42]	Palestine	Ø 13.3 y, 50,6% male (n=482)	Cluster Randomised Controlled Trial (3 time points)	8 x TRT sessions (2 per week) of 120 min in groups	CRIES-13 DSRS SDQ
Pfeiffer 2018 [43][1]	Germany	Ø 17.0 y, 94% male URM (n=99)	Randomized Controlled Trial (2 time points)	6 x TRT-sessions of 90 min for 2-5 participants	CATS-S & CATS-C PHQ-8 CPTCI-S
El-Khani 2021 [30]	Lebanon/ UK	Age n.r., % male n.r. (n=119)	3-armed Randomised Controlled Trial (3 time points)	5 x TRT-sessions of 120 min for ≤ 15 participants	CRIES-13 DSRS SDQ SCARED
Ooi 2016 [32]	Australia	Ø 12.6 y, 65% male (n=82)	Cluster Randomised Controlled Trial (3 time points)	8 x TRT sessions for 60 min in groups	CRIES-13 DSRS SDQ
Ehntholt 2005 [44]	UK	Ø 12.5 y, 65% male (n=26)	Before-after study (2 time points)	6 x TRT sessions for 60 minutes in groups of ≤ 8 participants	IES-R DSRS

[1] Whether 'mein Weg' was a TRT or another CBT-based group intervention could not be conclusively determined.

Published Studies					
Authors	Country	Population	Study design	Intervention	Instruments
					SDQ WTQ RCMAS
Protocols of Planned Studies					
Warner 2020 [27]	Sweden	Protocol for ASsIST 8-17 y (226 pts: 113 vs. 113)	Status of RCT: discontinued Plan of Cluster Randomised Controlled Trial (3 time points)	5 x TRT-sessions plus ev. FU-sessions	CRIES-13 PHQ-9 GAD-7 SDQ GSE Cantril Ladder CHU-9D TIC-P RTHC
Hiller 2021 [29]	Wales	Protocol for RELATE 10-17 y, 50 pts.	Feasibility randomized controlled trial (3 time points) Status: Recruiting	5 x TRT-sessions of 90-120 min	CRIES-8 CPSS SDQ SMFQ
Kankaanpää 2022 [20]	Finland	Protocol for RWS-FI 16 schools: C/A 1500 pts: 500 TRT vs. 500 waiting list vs. 500 PIER	Three-armed cluster randomized controlled trial (3 time points) Status: data collection completed	5 x TRT-sessions of 90-120 min	CRIES-8 SDQ CYRM-12 DSSYR Etc.

ADES - Adolescent Dissociative Experiences Scale, A – Adolescents, BPI – Brief Pain Inventory, C/A – Children and adolescents, CASaRM – Coping among Asylum - and Refugee Minors project, CATS – Child and adolescent trauma screen, CBT – Cognitive behavioral therapy CHU – Child health utility, CPSS – Child PTSD symptom scale, CPTCI-S - Child Post-Traumatic Cognitions Inventory, CRIES – Children´s revised impact of event scale, f-t-f – face-to-face, CYRM-12 – Child and youth resilience measure, DIPS – Diagnostic interview for mental disorders in children, DSRS – Depression self-rating scale for children, DSSYR – Daily stressors questionnaire, ESWQ -Exposure to war stressors questionnaire, FU – Follow-up. GAD – Generalized anxiety disorder, GHQ – General health questionnaire, GSE – General self-efficacy scale, HSCL – Hopkins symptom checklist, IES-R – Impact of event scale revised, ISPS – Impact on school performance scale, MADRS-S - Montgomery-Asberg depression rating scale self-report, MFQ – Mood and feelings questionnaire, PDEQ - Peritraumatic Dissociative Experiences Questionnaire, PHQ – Patient Health Questionnaire, PIER – Peer integration and enhancement resource, PTSD - Post-traumatic stress disorder, PTSS - Post-traumatic stress syndrome, RCMAS – Revised children´s manifest anxiety scale, RCT - Randomized controlled trial, RTHC – Refugee trauma history checklist, RWS-FI - Refugees Well School, SCARED- Screen for childhood anxiety-related disorders, SDQ – Strengths and difficulties questionnaire, SMFQ – Short mood and feeling questionnaire, SUOpORT – Swedish UnaccomPanied yOuth Refugee Trial, TIC – Trimbos costs associated with psychiatric illness, TGIC – Traumatic grief inventory for children, TRT – Teaching recovery techniques, UK - United Kingdom, URM-Unaccompanied refugee minors, WL – Waiting list, WTQ – War trauma questionnaire.

3.3 Effectiveness Outcomes

Post-Traumatic Stress Disorder (PTSD): CRIES-8 or -13

Eight studies used CRIES-8 or CRIES-13 to measure the effectiveness of TRT on PTSD (see Table 3-2): Four studies (1 RCT, 3 before-after studies) used CRIES-8, and four studies (4 RCTs) used CRIES-13.

8 Studien (5 RCTs, 3 Fallserien) verwendeten CRIES-8 or CRIES-13

All participants receiving TRT in seven studies had baseline values ≥17 points (T1), ranging from 23.0 (±10.5) [32] to 32.8 (±9.6). Only one study [30] included participants with less severe scores at baseline: 12 (±5.6) to 13.7 (±3.8) on different scales (intrusion, avoidance, arousal) of the CRIES-13.

7/8 Studien mit hohen PTBS-Baseline (T1) Werten von 23 bis 32,8 Punkten

Of the seven studies with participants with baseline values ≥17 points (T1) the TRT ranged from 11.7 (±6.0) to 28.6 (±15.7) at the time of measurement after the TRT intervention (T2). The one study [30] with participants with less severe disease showed scores of 7.8 (±5.3) to 8.9 (±4.2) on different scales (intrusion, avoidance, arousal) of the CRIES-13.

nach TRT-Intervention (T2) in diesen 7/8 Studien: von 11,7 bis 28,6 Punkten

The reduction from T1 (pre-TRT) to T2 (post-TRT) ranged in the five RCTs from -3.1 [34], -4,8/-3.6/-4.2 (intrusion, avoidance, arousal) [30], -4.9 [40-42], -7 [39], -7.1 [32]. In contrast, the participants in the control group (only reported in three RCTs) had a reduction of -0.5 [39], -2.2 [32], -2.5/-1.9/+0.8 (intrusion, avoidance, arousal) [30].

Reduktion in RCTs (T1-T2): –3,1 bis – 7,1 Punkte auf PTBS-Skala in TRT-Gruppe vs. -0,5 bis +0,8 Punkte

The reduction from T1 (pre-TRT) to T2 (post-TRT) range in the three before-after case series was -3.1 [19], -13/-14 (female/male participants) [36], -12.2 [38].

Reduktion in Fallserien (T1-T2): -3,1 bis -14 Punkte

Five studies (4 RCTs, 2 before-after studies) measured also on follow-up data (T3) at 3 months [30, 32, 34, 38], one RCTs [40-42] also reported at 6 months (T4). The reduction from T1 (pre-TRT) to T3 (follow-up at 3 months) ranged from -6.9 [40-42], -8.2/-10.6/-5.8 (intrusion, avoidance, arousal) [30], -10.3 [32], -12.3 [34] in RCTs and -12 in one before-after study [38], the other study measured, but did not report on T3 [19]. The RCT that also measured T4 at 6 months reported a reduction from T1 (baseline) to T4 of -7.9 points on the PTSD CRIES-13 score.

Reduktion in 4 RCTs (T3, 3 Monate FU): -6,9 bis -12,3 Punkte
Reduktion in Fallserien: -12 Punkte

1 RCT (T4, 6 Monate): -7.9

Since no minimally important difference (MID) is reported for CRIES [27] no conclusions on the clinical relevancy can be derived.

Psychological distress: SDQ

Four studies (3 RCTs and 1 before-after study) used SDQ to measure psychological distress (see Table 3-3).

4 Studien (3 RCTs, 1 Fallserie) verwendeten SDQ

The participants receiving TRT in these studies had baseline values (T1) ranging from 7.3 (±3.6)/ 8.7 (±1.6) (SDQ-psychosocial functioning/ SDQ-prosocial behavior) [32], 9.9 (±4.7)/ 9.3 (±5.2) (girls/ boys) [40-42], 14.6 (±5.5) [38] to 15.6 (±4.5). At the time of measurement after the TRT intervention (T2), the TRT-participants of the three RCTs ranged from 5.8 (±2.8.)/ 8.7 (±1.3) (SDQ-psychosocial functioning/ SDQ-prosocial behavior) [32] to 8.7 (±4.5)/9.5 (±4.9) (girls/ boys) [40-42] to 14.6 (±4.7) [30]. The before-after study reported 12.2 (±6.2) [38].

Baseline (T1) Werten von psychischem Stress 7,3 bis 15,6
nach TRT-Intervention (T2) 5,8 bis 14,6

The reduction from T1 (pre-TRT) to T2 (post-TRT) ranged in the three RCTs from -1.1/+0.2 (girls/ boys) [40-42], -1.2 [30], -1.5/0.0 (SDQ-psychosocial functioning/ SDQ-prosocial behaviour) [32] and was -2.4 in the before-after

Reduktion (T1-T2): in 3 RCTs: -1,5 bis +0,2 in Fallserie: -2,4 Punkte

study [38]. In contrast, the reduction in the control group was -1.4/-2.0 (girls/ boys) [40-42], -4.0 [30] and -2.2/ -0.2 (SDQ-psychosocial functioning/ SDQ-prosocial behaviour) [32] in the RCTs.

All four studies measured also on follow-up data (T3) at 3 months: The reduction from T1 (pre-TRT) to T3 ranged from -1.0/+1.7 (girls/ boys) [40-42], -1.7 [30] and -2.0/-0.1 (SDQ-psychosocial functioning/ SDQ-prosocial behavior) [32] in the RCTs and was -4.2 in the before-after study [38]. In contrast, the reduction in the control group was +0.2/-0.2 (girls/ boys) [40-42], -0.1 [30] and -3.5/+0.9 (SDQ-psychosocial functioning/ SDQ-prosocial behaviour) [32] in the RCTs.

Reduktion T1-T3 (3 Monate):
in 3 RCTs: -2,0 bis +1,7
in Fallserie: -4,2 Punkte

in Kontrollgruppe ähnliche Ergebnisse

An anchor-based minimally important differences (MID) of -1.7 points (95% CI -2.2, -1.2) is perceived as clinically relevant improvement in the SDQ [31].

MID liegt bei-1,7 Punkten

Additionally, the before-after study [38] reported that 4% of participants recovered, 14.3% improved, 63.2 stayed unchanged and 4.1% deteriorated.

Table 3-2: Results on the effectiveness of TRT on Post-Traumatic Stress Disorder (PTSD) measured with CRIES-8 or -13

Results from RCTs					
Author, year	Rondung 2022 [34]	Barron 2016 [39]	Qouta 2012 [40], Diab 2015 [41], Kangaslampi 2016 [42]	El-Khani 2021 [30][2]	Ooi 2016 [32]
Reduction in PTSD measured in CRIES-8 or CRIES-13 score: Absolute values	CRIES-8 T1: 31.7 (±12.1) T2: 28.6 (±15.7) T3: 19.4 (±9.8)	CRIES-13 T1: 25.6 (±7.1) vs 24.7 (±5.5) T2: 18.6 (±8.8) vs 24.2 (±8.0)	CRIES-13 T1: 32.8 (±9.6) vs 27.8 (±10.6) T2: 27.9 (±10.5) vs n.r T3: 25.9 (±11.0) vs 27.4 (±11.6) T 4: 24.9 (±9.8) vs 25.8 (±9.2)	CRIES-13: Intrusion T1: 13.7 (±3.8) vs 15.8 (±3.4) vs 13.5 (±4.0) T2: 8.9 (±4.2) vs 7.7 (±4.0) vs 11.0 (±3.9) T3: 5.4 (±4.3) vs 3.8 (±2.5) vs 8.7 (±4.1) CRIES-13: Avoidance T1: 13.3 (±3.8) vs 14.0 (±3.8) vs 12.8 (±4.0) T2: 9.7 (±5.2) vs 8.4 (±5.0) vs 10.9 (±3.9) T3: 2.7 (±5.9) vs 4.1 (±3.1) vs 8.9 (±4.7) CRIES-13: Arousal T1: 12.0 (±5.6) vs 13.8 (±6.3) vs 12.1 (±5.7) T2: 7.8 (±5.3) vs 8.7 (±3.9) vs 12.9 (±5.8) T3: 6.2 (±4.7) vs 4.9 (±3.5) vs 10.2 (±4.7)	CRIES-13 T1: 23.0 (±10.5) vs 17.9 (±11.9) T2: 15.9 (±9.6) vs 15.7 (±8.8) T3: 12.7 (±10.2) vs 14.2 (±11.1)
Results from case series (pre-post)					
	Yavna 2024 [36]	Durbeej 2024 [38]		Sarkadi 2018 [19]	
Reduction in PTSD measured in CRIES-8 or CRIES-13 score: Absolute values	CRIES-8 -14 (-31 to +12) (m) -13 (-34 to +18) (f)	CRIES-8 T1: 23.9 (±5.1) T2: 11.7 (±6.0) T3: 11.9 (±6.1) ss		CRIES-8 T1: 29.0 (±6.3) T2: 25.9 (±5.9) T3: n.r.	

[2] El-Khani 2021 [30] is (unfortunately) the only study reporting subscales.

Table 3-3: Results on the effectiveness of TRT on Psychological distress measured with SDQ

Results from RCTs and case series (pre-post)				
Author, year	RCT: Qouta 2012 [40], Diab 2015 [41], Kangaslampi 2016 [42]	RCT: El-Khani 2021 [30]	RCT: Ooi 2016 [32]	Pre-post case-series: Durbeej 2024 [38]
Changes in psychological distress measured in SDQ	(girls/boys) T1: 9.9 (±4.7)/9.3 (±5.2) vs 8.4 (±3.9)/ 10.8 (±4.7) T2: 8.7 (±4.5)/9.5 (±4.9) vs 7.0 (±3.9)/8.8 (±4.4) T3: 8.9 (±4.2)/11.0 (±5.0) vs 8.6 (±3.9)/10.6 (±4.5)	T1: 15.6 (±4.5) vs 16.8 (9 (±5.2) vs 15.0 (3.6) T2: 14.6 (±4.7) vs 12.8 (±4.1) vs 14.4 (±4.4) T3: 13.9 (±5.2) vs 14.2 (414.5.15.0) vs 14.9 (414.5.14.1)	SDQ-psychosocial functioning T1: 7.3 (±3.6) vs 7.5 (±4.2) T2: 5.8 (±2.8) vs 5.3 (±4.0) T3: 5.3 (±3.6) vs 4.0 (±3.0) SDQ prosocial behavior T1: 8.7 (±1.6) vs 8.3 (±1.6) T2: 8.7 (±1.3) vs (8.5 (±2.0) T3: 8.6 (±1.7) vs 9.2 (±0.8)	T1: 14.6 (±5.5) T2: 12.2 (±6.2) T3: 10.4 (±5.4) ss .4% recovered 14.3% improved 63.2% unchanged 4.1% deteriorated

Depressive symptoms: DSRS

Five studies (4 RCTs and 1 before-after study) used DSRS to measure depressive symptoms (see Table 3-4).

DSRS in 5 Studien (4 RCTs, 1 Fallserie)

The participants receiving TRT in these studies had baseline values (T1) ranging from 10.9 (±5.3) [32] to 16.3 (±4.9) [39]. At the time of measurement after the TRT intervention (T2), the TRT-participants of the four RCTs ranged from 14.7 (±4.3)[39], 14.3 (±5.7)/ 13.2 (±5.2) (girls/ boys) [40-42], 9.7 (±4.7) [30] and 8.7 (±5.5). The before-after study reported 12.5 (±3.5) [44].

Baseline (T1) Werte von depressiven Symptomen 10,9 bis 16,3
nach TRT-Intervention (T2) 8,7 bis 14,7

The reduction from T1 (pre-TRT) to T2 (post-TRT) ranged in the four RCTs from -1.6 (vs 0.0) [39], +1.1/+1.0 (vs. +1.3/ +0.8 in girls/ boys) [40-42], -3.6 (vs. +0.5) [30] and -2.2 (vs. -0.4) [32] in the RCTs. The before-after study reported +1.2 [44].

nach TRT-Intervention (T2) -3,6 bis +1,5

Four studies (3 RCTs,1 before-after study) measured also on follow-up data (T3) at 3 months: The reduction from T1 (pre-TRT) to T3 ranged from +0.4/+2.1 (vs. +1.2/+1 in girls/ boys) [40-42], -2.7 (vs. +1,6) [30] and -2,6 (vs. -1.2) [32] in the RCTs. The before-after study reported -0.8 [44].

Reduktion T1-T3 (3 Monate):
in 3 RCTs: -2,7 bis +2,1
in Fallserie: -0,8 Punkte
in Kontrollgruppe ähnliche Ergebnisse

Since no minimally important difference (MID) is reported for DSRS, no conclusions on the clinical relevance can be derived.

Psychological disorders: GHQ-12

Two studies (1 RCT and 1 before-after study) used GHQ-12 to measure psychological disorders (see Table 3-5). However, one study [38] did not report the results.

GHQ-12 in 2 Studien (RCT, Fallserie), nur 1 präsentiert Ergebnisse

The participants receiving TRT in the RCT [21, 37] had baseline values (T1) of 17.1 (±6.6). At the time of measurement, after the TRT intervention (T2), the TRT-participants improved to 10.7 (±5.2). In contrast, the control group had 15.0 (±7.0) and improved to 14.0 (±7.0) at T2. Therefore, the reduction was -6.4 in the TRT-group vs. -1 in the control group. At three months follow-up a -3.3 was measured in both groups combined.

Baseline (T1) Werte von psychischen Beeinträchtigungen
T1-T3: Reduktion von -3,3

Since no minimally important difference (MID) is reported for GHQ-12 no conclusions on the clinical relevancy can be derived.

Table 3-4: Results on the effectiveness of TRT on Depressive Symptoms measured with DSRS

Results from RCTs				
Author, year	Barron 2016 [39]	Qouta 2012 [40], Diab 2015 [41], Kangaslampi 2016 [42]	El-Khani 2021 [30]	Ooi 2016 [32]
Changes in depressive symptoms measured in DSRS	T1: 16.3 (±4.9) vs 16.2 (±5.7) T2: 14.7 (±4.3) vs 16.2 (±5.5)	(girls/boys) T1: 13.2 (±4.6)/12.2 (±4.6) vs 12.0 (± 4.6)/12.7 (±4.8) T2: 14.3 (±5.7)/13.2 (±5.2) vs 13.3 (±4.4)/13.5 (±5.8) T3: 13.6 (±5.0)/14.3 (±4.8) vs 13.2 (±4.9)/ 13.7 (±5.1)	T1: 13.3 (±5.9) vs 13.6 (±5.6) vs 11.3 (±6.5) T2: 9.7 (±4.7) vs 8.4 (±5.3) vs 11.8 (±4.0) T3: 10.6 (±5.6) vs 8.7 (±4.3) vs 12.9 (±6.2)	T1: 10.9 (±5.3) vs 9.2 (±4.6) T2: 8.7 (±5.5) vs 8.8 (±4.8) T3: 8.3 (±4.5) vs 8.0 (±5.1)
Results from case series (pre-post)				
Author, year	Ehntholt 2005 [44]			
Changes in depressive symptoms measured in DSRS	T1: 11.3 (±3.6) T2: 12.5 (±3.5) T3: 10.5 (±4.4)			

Table 3-5: Results on the effectiveness of TRT on Psychological disorders measured with GHQ-12

Results from RCTs and case series (pre-post)		
Author, year	RCT: Hasha 2019 [21], Hasha 2022 [37]	Pre-post case-series: Durbeej 2024 [38]
Changes in psychological disorders measured with GHQ-12	T1: 17.1 (±6.6) vs 15.0 (±7.0) T2: 10.7 (± 5.2) vs 14.0 (±7.0) ss T3: -3.3 (-5.5 to -1.5) I+C combined	n.r.

Life satisfaction and well-being: Cantril Ladder

2 Studien (RCT, Fallserie): Lebenszufriedenheit und Wohlbefinden

Two studies (1 RCT and 1 before-after study) used the Cantril Ladder to measure life satisfaction and well-being (see Table 3-6).

Verbesserung in 1 Studie um +3,5 Punkte auf Skala 1-10

The participants receiving TRT in the RCT [34] had baseline values (T1) of 5.1 (±3.1). The baseline values in the before-after study were not reported [18]. After the TRT intervention (T2), the TRT participants improved to 7.4 (±2.9). The data on the control group was not reported. At T3 (3 months), the participants scored 8.6 (±1.8) [34] and 5.12 (±2.76).

The improvement on the Cantril Ladder was +3.5 in the RCT (T1 to T3) and not reported for [18].

Since no minimally important difference (MID) is reported for the Cantril Ladder, no conclusions on the clinical relevance can be derived.

Severity of depression: PHQ-8 or PHQ-9

2 Studien (2 RCTs): Schwere der Depression

Two studies (2 RCTs) used the PHQ-8 or PHQ-9 to measure the severity of depression (see Table 3-7).

Reduktion:
T1 zu T2: -3,2 bis 4,9 Punkte
T1 zu T3: -2,7 Punkte

The participants receiving TRT in the RCTs had baseline values (T1) of 11.5 (±0.7) [34] and 12.3 (±5.6) [43]. At the time of measurement, after the TRT intervention (T2), the TRT participants improved to 7.4 (±5.3) [34] and 8.3 (±0.8) [43]. The reduction from T1 (pre-TRT) to T2 (post-TRT) was -4.9 [34] and -3.2 [43]. In contrast, the control group had an increase of +0.3 [43] in one RCT and was not reported in the other. One study also measured at T3 (3 months): the participants scored 9.6 (±72) [34], a reduction of -2,7 points.

MID bei 3,7 Punkten

MID estimates depended on baseline severity: the average MID estimates were 3.7 points for the PHQ–9 [35].

Table 3-6: Results on the effectiveness of TRT on Life satisfaction and well-being measured with the Cantril Ladder

Results from RCTs and from case-series (pre-post)		
Author, year	RCT: Rondung 2022 [34]	Pre-post case-series: Solhaug 2023 [18]
Changes on the Cantril Ladder for Life Satisfaction (LS) after TRT	T1: 5.1 (±3.1) T2: 7.4 (±2.9) T3: 8.6 (±1.8)	T2: 4.77 (±2.52) ss T3: 5.12 (±2.76) ns TRT practice and Asylum status with ss association with increase in LS

Table 3-7: Results on the effectiveness of TRT on Severity of depression measured with PHQ-8 or PHQ-9

Results from RCTs		
Author, year	Rondung 2022 [34]	Pfeiffer 2018 [43]
Changes in Severity of depression measured with PHQ-8 or 9	PHQ-9 T1: 12.3 (±5.6) T2: 7.4 (±5.3) T3: 9.6 (±7.2)	PHQ-8: T1: 11.5 (±0.7) vs 11.5 (±0.7) T2: 8.3 (±0.8) vs 11.8 (±0.8)

3.4 Safety Outcomes

None of the studies reported on safety outcomes

keine Daten zu Sicherheitsaspekten verfügbar

3.5 Economic Outcomes: Costs

Two studies (1 RCT, 1 before-after study) reported on costs:

- Barron 2016 [39] reported that the cost per child/ adolescent was $38.68 and the cost per benefit on reduction of PTSD was $ 1,121.52.
- Yavna 2024 [36] reported that the cost per child/ adolescent was $50 (incl. cascade training, payment of facilitators, NGO administration) and the cost per benefit on reduction of PTSD was $119.

2 Studien berichten zu Kosten:
zwischen $39 bis $50 Intervention pro Kind
zwischen $119 und $1.122 für PTBS Reduktion

3.6 Discussion of systematic review on TRT

In summary, we identified twelve studies, investigating the effectiveness of Teaching Recovery Technique (TRT) in children and adolescents in 1,881 participants: seven randomised clinical trials (RCTs, encompassing 1,032 participants: 511 in the TRT intervention groups and 521 in the control groups) and five before-after studies (encompassing 1,370 participants). All studies have been conducted in the respective countries (or regions) of arrival and were sponsored publicly. Most participants had a high burden of posttraumatic stress disorder (PTSD) expressed by ≥17 points on the Children's Revised Impact of Event Scale (CRIES) scale, developed and recommended by the Children and War Foundation [26].

Evidenz aus 12 Studien mit insgesamt 1.881 Teilnehmer*innen an TRT-Programmen

alle Studien öffentlich finanziert

Eight out of the twelve studies measured PTSD before and after the TRT training and eventually at a third point in time (three months in five studies and six months in one study). The results show univocal results with a reduction of -3.1 to -7.1 points on CRIES in the RCTs in contrast to -0.5 to +8.8 in the control groups (on the waiting lists) after the training and -9.9 to -12.3 after three months. In the uncontrolled case series the reduction was even higher with up to -14 points after the training. The one study that measured also at six months showed stable effects with -7.9 points.

8/12 Studien erhoben PTBS-Werte vor und nach dem TRT-Training bis 3-6 Monate nach TRT-Training

durchgängig konsistente Ergebnisse von relevanten Reduktionen der PTSD-Belastung: höhere Werte in Beobachtungsstudien als in RCTs

Uncontrolled studies, which lack a comparison group, tend to show larger effect sizes than controlled studies. This discrepancy is common and can be explained by the fact that uncontrolled studies are susceptible to various biases, including selection bias, observer bias, and placebo effects, which can inflate the observed treatment effect.

However, while the results on the effectiveness of TRT training on the symptoms of posttraumatic stress disorder are unambiguous and are all directing towards improvement, those studies which also measured changes in psychological distress (SDQ) showed less clear results with either no differences in the control groups (in RCTs), only little reduction equal or below the minimal important clinical difference for a perceived change or some change. One case-series reported that 63% of participants stayed unchanged, while only

weniger konsistente Ergebnisse bei depressiven Symptomen

sehr viele unterschiedliche Messinstrumente erschweren Auswertung

4% recovered and 14.3% improved. The same holds for depressive symptoms measured with DSRS or GHQ-12 and severity of depression measured with PHQ. The results are somewhat contradictory and not as straightforward as with PTSD. Unfortunately, a variety of different measurements were applied, and no general conclusions can be drawn on them.

TRT-Training zielt aber nur auf Gesundheitsförderung von belasteten Kindern ab

Nevertheless, the TRT group training is aimed at reducing posttraumatic stress symptoms only and not at reducing depression and anxiety. When identifying participants in need of individual therapy due to severe mental disorders such as depression, these are referred to care institutions offering such individual therapies [45]. Therefore, the linkage to and communication with care facilities is important [9].

3.6.1 Interpretation

frühere Übersichtsarbeiten kommen zu selben Ergebnissen

The results of this most recent systematic review are in line with other reviews: the Oxfam report 2017 [46] states that there is strong evidence that mental health programs are effective in reducing functional impairment but have little or no impact on anxiety in children and adolescents. There is moderate evidence that such programs reduce symptoms of PTSD. The Cochrane Review on multiple interventions [47] underlines that more evidence and research attention is needed for further outcomes (depression, anxiety) other than PTSD. Giles [48] finds only small, not significant effects on depression and better results in younger children (<12 years). Alzagoul [49] concludes that TRT demonstrated statistically significant reduction in PTSD-scores on short-term, but no long-term data on effectiveness is available. However, adverse outcomes such as increased distress and depression should be given more attention [49].

aber langfristige Nachbeobachtungen zum Anhalten der Effekte fehlen

mögliche, die Effekte modifizierende Faktoren: Ausbildung und Muttersprache der TRT-Moderatoren

Our results must be interpreted with caution since some more detailed information provides a more differentiated picture of some moderating factors: The training of facilitators to offer the TRT training is essential [50, 51]. Such facilitators, using the native language eventually, play a vital role and show even better results with increased experience [36]. In Ukraine, with facilitator cascade-training, the number of facilitators was rapidly upscaled, and TRT could be provided to many schoolchildren [36]. Cultural awareness, cultural sensitivity and tailoring (in contrast to unadapted programs) is discussed as an impactful fact in some studies [45, 46, 48]. One essential part of TRT is explaining and normalising trauma reaction [51]. Therefore, the intervention must be used responsibly to follow the "do-not-harm" principle. The value of talking about painful events and reactions must be balanced against the resistance to talking, esp. in the context of cultural differences in expressions of painful experiences [51].

Sensibilität gegenüber Kulturen, achtsamer Umgang mit dem Grundsatz, nicht zu schaden (Resistenz über schmerzhafte Situationen zu sprechen)

Stressfaktoren: Asylstatus und Gefühl von Sicherheit

The asylum status and the corresponding perception of security also contribute to improvement: there is a significant difference between youth granted residence and those not granted. This is of practical relevance for interpreting the stressors and the influences on improvement after TRT and for planning future TRT programs [18, 45].

unbegleitete Minderjährige oder Familienanbindung

Finally, the gender and the status as unaccompanied refugee or the embedment in a family structure correlated with better (or worse) improvement (accompanied training of parents in parenting skills shows the best results [30]. While boys showed greater improvements in some studies [37, 40] and girls had less or even no effects, this distinction was not found in other studies. In general, participants with higher baseline values showed greater gains [44].

mögliche Geschlechterunterschiede

Kontextfaktoren wenig untersucht

The interventions seem equally effective in different contexts, such as rural contexts, large cities or encampments [39, 48]. However, the studies did not sufficiently analyse the contextual factors: no final conclusions can be derived.

Faktoren der Implementierung: Finanzierung des TRT-Trainings und klare Verantwortlichkeiten

Finally, maintaining funds and resources for the TRT training and networks of collaborative organisations with clear and distinct responsibilities builds the necessary infrastructure for successful implementation [9, 17, 45].

persönliche oder Online Teilnahme

Last but not least, the delivery format might affect the feasibility and acceptability of the TRT training. Most programs are delivered in person. However, the transfer to a video format was practised during the COVID-19 pandemic, especially in new war-affected countries such as Ukraine [36]. This transfer uncovered several issues for adaptation: safety rules and emergency response protocol, communication strategies and guidance on group composition and intervention delivery [52].

3.6.2 Limitations

Limitationen der Studien:

The following limitations of the studies must be considered when interpreting the results:

selbstberichtete Messinstrumente sind anfällig für Verzerrungen (Erwartungshaltung)

- CRIES and the other instruments used self-reported scales that are prone to bias due to eventual expectations perceived by the participants.

viele unterschiedliche Messinstrumente

- Due to the many different scales applied no evaluation other than CRIES was possible. It is highly recommended in further studies to restrict oneself to only a few instruments to measure the effects.

kurze Nachbeobachtungen

- The follow-up period were rather short with pre-post assessments (baseline and at 2 months) and eventually a three- to six-month maintenance assessment.

insb. in Beobachtungsstudien: viele Teilnehmer*innen „verloren"

- Especially in the case series, there was a high number of losses-to-follow-up, which are more likely among those who experienced no effects. This might have influenced the results and might have introduced a bias towards better effects. However, since the losses were far less in the RCTs, the results still seem to be stable, directing into good effectiveness.

Aspekte der Sicherheit und ungewollter Effekte nicht untersucht und/oder berichtet

- Safety aspects (e.g. suicide in traumatised refugees and awareness on unintended effects and risks [51]) were not investigated or discussed in any of the studies.

aber: keine unterdrückten Ergebnisse

However, the studies were assessed with moderate risk of bias (RoB), since no outcomes were suppressed or the results overinterpreted.

Also, the following limitations of the review need to be mentioned:

- The study focused exclusively on English-language publications in peer-reviewed journals listed in MEDLINE. This might have led to missing studies in other languages (such as Arabic) and the lessons they had learned.
- The selection of the studies for this review focused on reporting the effects of TRT training and not on similar interventions using other terminology or other program designs or aspects of implementation.
- Due to resource limitations, the systematic search, the data extraction, and the risk of bias assessment were conducted by one reviewer (although experienced) only.

For the reasons mentioned above, all conclusions should be taken cautiously.

Limitationen dieser Übersichtsarbeit: nur englischsprachige Studien (keine arabischen)

nur TRT-Ergebnisse im Fokus, nicht andere Schulungsprogramme

Review nur von 1 Wissenschafterin durchgeführt

3.7 Conclusion

The findings demonstrate that even brief (6-8 weeks) programs in groups of children and adolescents can lead to significant and relevant enhancements for the refugees themselves but also for the caregivers and eventually for less needs in follow-up interventions. The findings are in accordance with psychological theory that support children and adolescents in a safe environment can provide coping mechanisms with traumatic experiences. Enhancing the capacities to offer such health promoting and low-budget public health interventions seems of utmost importance. The provision of health services for all populations is described in the 2030 agenda of sustainable development [53]: TRT as health promotion and disease prevention program is addressing the health needs of vulnerable groups.

konsistente Ergebnisse, dass kurzes, wenig kostspieliges 6-8 wöchiges TRT-Training zu einer relevanten Reduktion von PTBS Symptomen führt

4 Results of Austrian TRT-Programme at AFYA

4.1 Description of the TRT-Programme at AFYA

Adaptierung des TRT-Programmes in Absprache mit Children and War Foundation

AFYA was founded in 2017 by a group of health professionals in response to unmet mental health needs in the context of the 2015 refugee influx [54]. AFYA programmes for mental health promotion are financed through public grants for integration, education or health (promotion). In agreement with the Children and War Foundation the TRT programme offered by AFYA was adapted [55]: TRT is taught two hours per week in groups of eight participants on average (range 3 – 19). Eight sessions are offered (see Table 4-1). The facilitators use their native language (such as Arabic, Ukrainian, Dari, Somali and Kurdish). Facilitators have undergone training for the TRT Programme and attend regular supervision.

2018-2024: 1.426 KiJu in 176 Gruppen

Between 2018 - 2024 AFYA has organised 176 TRT courses. A total number of 1,426 children have participated in the programme.

Table 4-1: AFYA TRT-Programme: eight sessions and their content

	Session	Content
0	Introduction	Forming the group, establishing ground rules
1	Intrusive memories	Psychoeducation: trauma events and reactions; Normalisation of traumatic stress reactions; Establishing a safe place.
2	Hyperarousal	Stress-Thermometer: Bodymap, Individual signs for stress. Skills, Breathing exercise.
3	Intrusion	Skills for intrusive thoughts, Time for bothering thoughts and worries. Progressive muscle relaxation (PMR) short version, Positive self-talk, Sleep and activity planning.
4	Avoidance/Anxiety	Mapping own reminders, Introducing graded exposure.
5	Intrusive Memories and Dreams	Picture changing techniques, Feel good button, Dual attention technique, Dream work.
6	Avoidance	Memories, Life-line, Support network, Trauma narrative (drawing, writing, talking).
7	Look to the future	Integration of experience, Looking to the future.

4.2 Description of Sample

Datensample:

von 372 Teilnehmer*innen 18 erhobene Variablen/ Merkmalsausprägungen

The data set provided for the evaluation contains 372 cases and 18 variables. An evaluation was conducted for 292 cases in October 2024 [56]. 81 cases are new cases from the period 2023-2024. These new cases were checked for data consistency, cleaned and added to the existing data set. One case (ID 364) was removed from the analysis due to an incorrect CRIES value (intrusion of the first measurement, higher than the possible 24 > 20). This left 372 cases for the analysis.

The participants in the training programme are described in this chapter on the basis of the following characteristics: gender, age, country of origin, duration of stay and location of the training programme.

4.2.1 Gender and Age

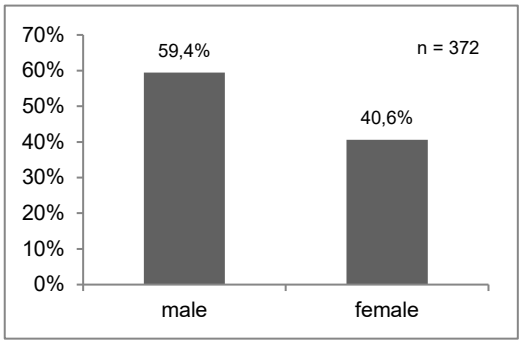
Data is available on 372 participants for the period 2018-2024. 59% of the participants are male, and 41% are female.

Informationen von 372 Teilnehmer*innen:
59% männlich

The average age is 13.4 years. The youngest participants are 8 years old; the oldest participant is 20. 12- and 13-year-old participants are the most strongly represented. This group comprises 154 participants, which corresponds to a share of 44%.

Ø 13,4 Jahre

Age was determined using the year of birth and the year of the first CRIES survey (before the training programme). No data on the year of birth is available for 22 participants.



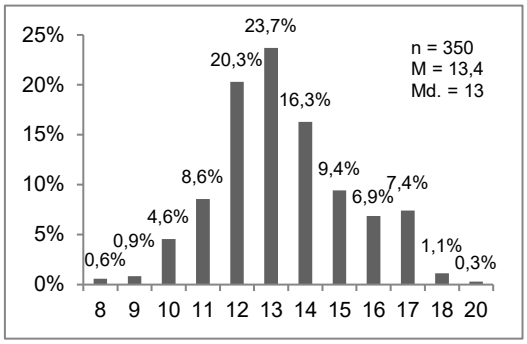


Figure 4-1: Distribution by gender; Figure 4-2: Distribution by age

4.2.2 Country of origin and duration of stay

Among the participants, the countries of origin Syria (n=188; 51%), Ukraine (n=103; 28%) and Afghanistan (n=47; 13%) are most frequently represented. Overall, 91% of participants come from one of these countries of origin. The category 'Other country' includes Iran (n=9), Somalia (n=9), Chechnya (n=7), other (Egypt, Pakistan, n=7) and Iraq (n=2).

Herkunftsländer
Syrien (51%)
Ukraine (28%)
Afghanistan (13%)

The 46% of participants had been in Austria for 12 to 23 months at the time of the first CRIES survey. For 16%, their arrival was less than 1 year ago. 38% of participants have been in Austria for 2 years or longer. The longest period of time between arrival and the training programme is 14 years.

Aufenthalt in Österreich:
46% seit 12-23 Monaten
16% seit weniger als 1 Jahr
38% seit ≥ 2 Jahre

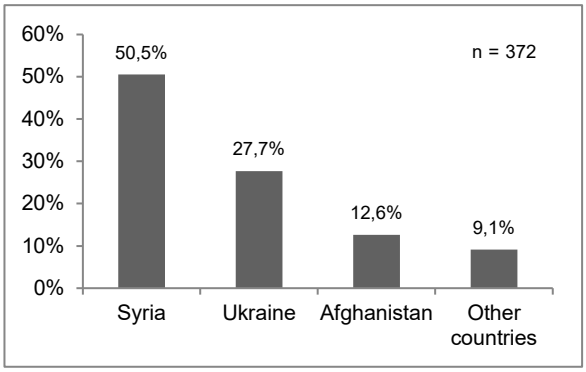


Figure 4-3: Distribution by country of origin; Austria

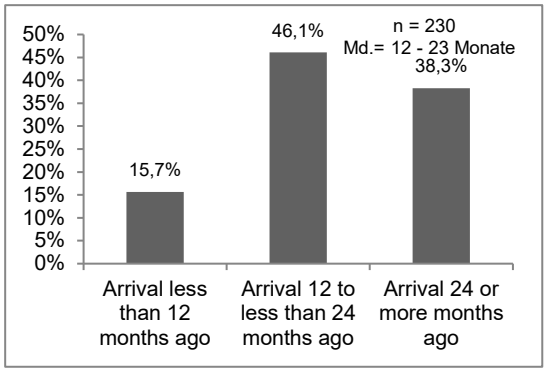


Figure 4-4: Distribution by duration of stay in

4.2.3 Location of the training programme

The participants took part in an eight-week training programme on coping with trauma. Three-quarters of the training programmes took place in a secondary school. 7 % were held in a polytechnic school and 1 % in primary schools. 16% of the training programmes took place outside of schools. Two trainers led the trauma management training programme in most cases; except where group size was ≤5 - mainly used in training programmes with Ukrainian participants.

3/4 der TRT-Programme in Schulen durchgeführt

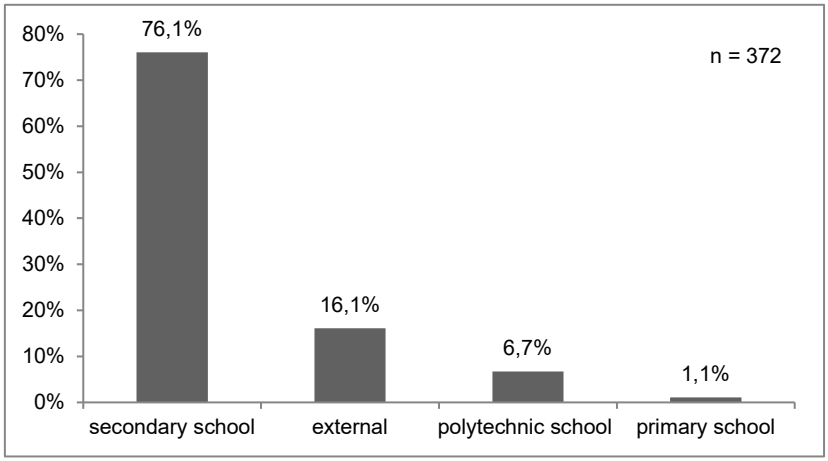


Figure 4-5: Distribution by location of the training programme

4.4 CRIES-scores at baseline

Verwendung von CRIES-8

Scores von 0-40 möglich
Scores ≥17 bedeutet PTBS

At the beginning of the training programme, a survey was conducted using the CRIES-8 measurement instrument. The measuring instrument consists of 8 questions, half assigned to the intrusion dimension and the other half to the aversion dimension. The two dimensions can achieve score values from 0 to 20. The total CRIES score can therefore range from 0 to 40. The higher the score value, the higher the post-traumatic stress of the respondent. A CRIES total score value of 17 or greater is assumed to indicate post-traumatic stress disorder.

Auswertung von Gruppenunterschieden mit 2 Ausprägungen: T-test, α = 0.05
>2 Ausprägungen: ANOVA, Tukey test

For characteristics of the data set with two categories (unaccompanied minors, gender), group differences were tested for significance using a T-test for independent samples (α = 0.05). In the case of characteristics with more than two categories, the groups were analysed for significant differences using a one-way ANOVA and Tukey test (post-hoc test).

4.4.1 Unaccompanied minor refugees (UMR)

Baseline Scores von unbegleiteten Minderjährigen (n=33)

Of the 372 participants, 33 were unaccompanied minors. In the group of 'unaccompanied minors', the mean value for the intrusion scale is 11.91 (SD: 4.653). In the comparison group, the mean value is 9.94 (SD: 4.806). For the Aversion scale, the average score for 'unaccompanied minors' is 13.48 (SD: 4.665), while the mean score for the group without unaccompanied minors is 10.32 (SD: 5.475). The average total CRIES score for the group of 'unaccompanied minors' is 25.39 points (SD: 7.412), for the group without unaccompanied minors it is 20.26 points (SD: 8.136).

Table 4-2: CRIES scores by characteristic "Unaccompanied minors"

Unaccompanied minors'		Intrusion	Aversion	CRIES-total
yes (n=33)	Mean value	11.91	13.48	25.39
	Standard deviation	4.653	4.665	7.412
	Minimum	2	4	6
	Maximum	20	20	40
no (n=339)	Mean value	9.94	10.32	20.26
	Standard deviation	4.806	5.475	8.136
	Minimum	0	0	0
	Maximum	20	20	38

Baseline Scores von unbegleiteten Minderjährigen zu Baseline im Vergleich um durchschnittlich 5 Punkte höher

- The intrusion score was on average 2 points higher for the group with unaccompanied minors (95%-CI[0.3;3.7]).
- The aversion score was on average 3.2 points higher for the group with unaccompanied minors (95%-CI[1.2;5.1]).
- The CRIES total score was on average 5.1 points higher for the group with unaccompanied minors (95%-CI[2.2;8.0]).
- The differences are significant for all three scores (α = 0.05).

The CRIES screening at the beginning of the training programme showed that 91% of the unaccompanied minors tested positive for PTSD (score ≥ 17). In the group of participants without unaccompanied minors, this proportion was significantly lower at 67% (α = 0.05).

91% aller unbegleiteter Minderjähriger: PTBS score ≥ 17

4.4.2 Gender

For male participants, the mean score for the intrusion scale is 9.29 (SD: 4.818); for female participants, the mean score is 11.30 (SD: 4.581). For the Aversion scale, the average score for male participants was 10.71 (SD: 5.562), while the mean score for female participants was 10.44 (SD: 5.362). The average total CRIES score for the group of male participants is 20.0 points (SD: 8.388), for the female participants it is 21.75 points (SD: 7.820).

Baseline Scores nach Geschlecht

Table 4-3: CRIES scores by gender

0		Intrusion	Aversion	CRIES-total
male (n=221)	Mean value	9.29	10.71	20.01
	Standard deviation	4.818	5.562	8.388
	Minimum	0	0	0
	Maximum	20	20	40
female (n=151)	Mean value	11.30	10.44	21.75
	Standard deviation	4.581	5.362	7.820
	Minimum	0	0	1
	Maximum	20	20	38

There was a significant difference (α = 0.05) in the intrusion score and the CRIES total score for the distinguishing feature of gender.

- The intrusion score averaged 2.0 points higher for female participants (95%-CI[1.0;3.0]).
- The CRIES total score was on average 1.7 points higher in female participants (95%-CI[0.5;3.4]).

Baseline Scores von Mädchen (n= 151) im Vergleich um durchschnittlich 1,7 Punkte höher als bei Burschen (n=221)

The CRIES screening at the beginning of the training programme showed that 75% of the female participants tested positive for PTSD (score >= 17). In the group of male participants, this proportion was lower at 64%. This difference is significant (α = 0.05).

75% der Mädchen und 64% der Burschen PTBS score ≥ 17

4.4.3 Age

No significant differences were found in the different age-groups.

keine Unterschiede zu Baseline in Altersgruppen

4.4.5 Country of origin

Baseline Scores nach Herkunftsland

The highest score values at baseline were measured for participants from Afghanistan. The average intrusion score is 11.57 (SD: 4.885), the average aversion score is 12.77 (SD: 5.184) and the mean value of the CRIES total score at the start of the training programme is 24.34 (SD: 8.590).

Table 4-4: CRIES Scores by "country of origin"

Herkunftsland		Intrusion	Aversion	CRIES-total
Syria (n=188)	Mean value	10.07	10.75	20.82
	Standard deviation	4.675	5.369	7.788
	Minimum	0	0	0
	Maximum	20	20	38
Ukraine (n=103)	Mean value	9.94	9.30	19.24
	Standard deviation	5.052	5.597	8.648
	Minimum	0	0	1
	Maximum	20	20	38
Afghanistan (n=47)	Mean value	11.57	12.77	24.34
	Standard deviation	4.885	5.184	8.590
	Minimum	1	1	5
	Maximum	20	20	40
Other country (n=34)	Mean value	8.79	10.76	19.56
	Standard deviation	4.498	5.234	7.110
	Minimum	0	0	1
	Maximum	16	18	32

Baseline Scores von Afghan*innen um 3,5 Punkte höher im Vergleich zu Ukrainer*innen und Syrer*innen

A significant difference ($\alpha = 0.05$) in the aversion score and the CRIES total score was found between the group of participants from Afghanistan and the group of participants from Ukraine.

- The aversion score for the group from Afghanistan was on average 3.5 points higher (95%-CI[1.0;5.9]) than that of the Ukrainian participants.
- The CRIES total score was on average 5.1 points higher (95% CI [1.4;8.8]) for the group with Afghanistan as their country of origin than for the Ukrainian participants.

A significant difference ($\alpha = 0.05$) was found in the CRIES total score between the group of participants from Afghanistan and those from Syria.

- The CRIES total score for the group from Afghanistan was on average 3.5 points higher (95%-CI[0.1;6.9]) than that of the Syrian participants.

79% der Afghan*innen und 64% der Ukrainer*innen: PTBS score ≥ 17

The CRIES screening at the beginning of the training programme concluded that 79% of the participants from Afghanistan tested positive for PTSD (score >= 17). This proportion is lowest in the group of participants from Ukraine at 63%. However, this difference is not significant ($\alpha = 0.05$).

4.4.6 Length of stay

No significant differences were found in the characteristics of length of stay.

keine Unterschiede zu Baseline nach Dauer des Aufenthalts in Österreich

4.4.7 CRIES scores and PTSD by group at baseline

Table 4-4 shows the CRIES score values and the proportion of participants with PTSD by group at baseline.

Zusammenfassung der Scores zu Baseline: nach Gruppen

Table 4-5: CRIES scores and PTSD at baseline according to groups

		n	Intrusion	Aversion	CRIES total	% PTSD
All		372	10,11	10,60	20,72	68,8
URM						
	yes	33	11.91	13.48	25.39	90,9
	no	339	9.94	10.32	20.26	66,7
Gender						
	male	221	9.29	10.71	20.01	64,3
	female	151	11.30	10.44	21.75	75,5
Country of Origin						
	Syria	188	10.07	10.75	20.82	69,1
	Ukraine	103	9.94	9.30	19.24	63,1
	Afghanistan	47	11.57	12.77	24.34	78,7
	Other country	34	8.79	10.76	19.56	70,6
Age						
	< 12 years	51	10.16	10.82	20.98	70,6
	12- to 13 years	154	9.92	10.16	20.08	65,6
	≥ 14 years	145	10.30	10.80	21.10	71,7
Length of stay						
	< 12 months	36	9.94	12.11	22.06	75,0
	12 to 23 months	106	10.85	9.78	20.63	70,8
	≥24 months	88	9.83	11.09	20.92	68,2
Location of training						
	Secondary school	283	10.04	10.11	20.14	66,1
	External	60	10.57	11.93	22.50	78,3
	Polytechnic school	25	10,24	12,52	22,76	76,0
	Primary school	4	7.75	14.00	21.75	75,0

4.5 CRIES-Scores after the TRT training

4.5.1 Outlier analysis

A dependent t-test was performed to test the significance between the CRIES results (comparison before and after). An outlier analysis was carried out in advance for this purpose. The data set contains four slight outliers (ID 68, 103, 151, 273); for further analysis, the decision was made to analyse all cases unchanged and not to exclude any cases.

Signifikanz-Testung und Ausreißeranalyse

keine Ausschlüsse

The prerequisite for the dependent t-test (with $n < 30$) is the normal distribution of the difference between the CRIES total before and CRIES total after values. However, as the sample for the data set contains 372 participants, normal distribution is not a condition for the t-test. A test of the data for normal distribution (Shapiro-Wilk test) is also positive.

4.5.2 Results and effect size: full sample and in groups

signifikant geringere CRIES-Scores nach dem TRT-Training

The CRIES values are significantly lower in the participants after the trauma programme, $t(371) = 8.181$, $p = .000$.

According to Cohen, the effect can be classified as small with $d = 0.42$.

4.5.3 Overview of changes in CRIES scores by groups

signifikante Unterschiede nach Gruppen

PTBS ≥ 17
unbegleitete Minderjährige und Ort des TRT-Trainings

mit PTBS
Effektgröße: mittel
ohne PTBS:
Effektgröße klein

Significant differences within groups can be seen in the characteristics 'PTSD before TRT', 'unaccompanied minors' and 'location of the training programme'. There is a very clear difference between participants with PTSD at the start of the training programme and those without measured PTSD.

- After the training programme, the CRIES score decreased significantly for participants with PTSD ($t(255) = 11.899$, $p = .000$). According to Cohen, the effect can be categorised as medium (but significantly higher than for the overall sample) with $d = 0.74$.
- For participants without PTSD at the start of the training programme, the CRIES score increased significantly ($t(115) = -2.023$, $p = .045$). According to Cohen, the effect can be categorised as small with $d = -0.19$.

besonders ausgeprägter Effekt bei unbegleiteten Minderjährigen mit PTBS

For unaccompanied minors, the CRIES total score decreased significantly more on average than for the other participants. Since the proportion of participants with PTSD in this group is very high at the time of the study (91%) and there is a positive correlation between PTSD and the improved CRIES score, the effect is less attributable to the characteristic 'unaccompanied minor'.

größere Effekte bei TRT-Training in externem Setting im Vergleich zur Mittelschule
Erklärung: mehr Teilnehmer*innen mit PTBS

A large effect can be seen in training programmes that were carried out externally. In these participants, the CRIES score decreased significantly ($t(59) = 7.718$, $p = .000$) with a Cohen effect of $d = 0.92$. In this group, the CRIES score improved significantly compared to participants who had been trained in middle school. Part of the effect can be explained by the higher proportion of participants with PTSD at baseline within the externally trained group (compared to middle school). Nevertheless, a significant correlation between location and CRIES score improvement can be observed.

Überblick über CRIES-Scores vor und nach dem TRT-Training nach Gruppen
Verbesserungen, aber auch Verschlechterungen

Table 4-5 shows the CRIES score differences for the entire data set and various characteristics. Positive differences for intrusion, aversion and CRIES total are interpreted as an improvement, negative differences as a deterioration. In addition, the proportion of participants with PTSD before and after the training programme is shown. In the case of significant improvements in the CRIES total score, the Cohen effect is indicated.

Table 4-6: CRIES score values differences pre-post training programme and PTSD percentages

		n	Intrusion	Aversion	CRIES total	% PTSD before	% PTSD after TRT	Cohen d (α =0,05)
All		372	2.04	1.87	3.89	68,8	50,3	0,42
URM								
	yes	33	4.12	3.55	7.67	90,9	51,5	0,82
	no	339	1.84	1.71	3.52	66,7	50,1	0,39
Gender								
	male	221	2.07	2.52	4.54	64,3	42,1	0,50
	female	151	1.99	.93	2.93	75,5	62,3	0,31
Country of Origin								
	Syria	188	1.72	1.74	3.41	69,1	51,1	0,35
	Ukraine	103	2.70	1.80	4.50	63,1	45,6	0,63
	Afghanistan	47	2.74	2.53	5.28	78,7	59,6	0,50
	Other country	34	0.85	1.91	2.76	70,6	47,1	---
Age								
	< 12 years	51	2.41	2.98	5.39	70,6	43,1	0,62
	12- to 13 years	154	1.83	1.56	3.39	65,6	50,0	0,36
	≥ 14 years	145	2.26	1.73	3.92	71,7	51,0	0,44
Length of stay								
	< 12 months	36	2.06	.86	2.92	75,0	58,3	---
	12 to 23 months	106	2.61	2.47	5.08	70,8	42,5	0,56
	≥24 months	88	1.10	1.74	2.73	68,2	59,1	0,34
Location of training								
	Secondary school	283	1.86	1.47	3.29	66,1	50,9	0,36
	External	60	3.60	3.73	7.33	78,3	41,7	0,93
	Polytechnic school	25	1.00	1.56	2.56	76,0	64,0	---
	Primary school	4	-2.25	4.75	2.50	75,0	50,0	---
PTSD before TRT								
	yes	256	3.14	3.25	6.39	100	57,8	0,74
	no	116	-.38	-1.16	-1.63	0	33,6	-0,19

In addition, Table 4-6 compares the CRIES score values before and after the training programme.

in Unterschieden: Prozente (Tabelle 4-5) und in absoluten Werten (Tabelle 4-6)

Table 4-7: CRIES score-values before and after the training programme

		n	Intrusion before	Intrusion after	Aversion before	Aversion after	CRIES total before	CRIES total after
All		372	10.11	8.07	10.60	8.73	20.72	16.80
URM								
	yes	33	11.91	7.79	13.48	9.94	25.39	17.73
	no	339	9.94	8.10	10.32	8.61	20.26	16.71
Gender								
	male	221	9.29	7.22	10.71	8.20	20.01	15.42
	female	151	11.30	9.31	10.44	9.51	21.75	18.82
Country of Origin								
	Syria	188	10.07	8.36	10.75	9.01	20.82	17.36
	Ukraine	103	9.94	7.24	9.30	7.50	19.24	14.75
	Afghanistan	47	11.57	8.83	12.77	10.23	24.34	19.06
	Other country	34	8.79	7.94	10.76	8.85	19.56	16.79
Age								
	< 12 years	51	10.16	7.75	10.82	7.84	20.98	15.59
	12- to 13 years	154	9.92	8.08	10.16	8.60	20.08	16.69
	≥ 14 years	145	10.30	8.04	10.80	9.07	21.10	17.11
Length of stay								
	< 12 months	36	9.94	7.89	12.11	11.25	22.06	19.14
	12 to 23 months	106	10.85	8.24	9.78	7.31	20.63	15.55
	≥24 months	88	9.83	8.73	11.09	9.35	20.92	18.08
Location of training								
	Secondary school	283	10.04	8.17	10.11	8.64	20.14	16.81
	External	60	10.57	6.97	11.93	8.20	22.50	15.17
	Polytechnic school	25	10.24	9.24	12.52	10.96	22.76	20.20
	Primary school	4	7.75	10.00	14.00	9.25	21.75	19.25
PTSD before TRT								
	yes	256	12.19	9.05	12.88	9.63	25.07	18.69
	no	116	5.52	5.90	5.58	6.74	11.09	12.64

4.6 Economic Outcomes: Costs

The total project costs for the AFYA TRT programme in 2024 amounted to €172,204. This included personnel expenses for trainers (incl. training and supervision) and for the coordination and support team. It also covered indirect project costs such as training materials, transportation, and back-office operations.

With this budget, a total of 31 TRT groups were implemented, reaching 254 children and their parents.

This results in (including 16 hours/ eight double sessions of TRT-programme as well as all overhead costs such as training of staff, parent involvement etc.):

- An average cost of €5,555 per group
- An average cost of €678 per participant

Jahresbudget 2024: 172.000

Kosten je TRT-Gruppe (n=31): € 5.555

Kosten je Teilnehmer*in (n=254): € 678

4.8 Summary of AFYA Results

To summarize the results of the AFYA data…

- The CRIES score values are significantly lower after the training programme than at the beginning.
- For participants with PTSD before the training programme (CRIES total score ≥17), there was a significant improvement in the CRIES total score after the training programme.
- The effect is significantly stronger than for the entire data sample. In participants without PTSD (CRIES total score < 17) before the training programme, there was a significant deterioration in the CRIES total score after the training programme.
- Unaccompanied minors have the highest proportion of participants with PTSD before the training programme (CRIES total score ≥17).
- For participants where the training programme took place externally and not in the secondary school, there is a significant difference in the improvement of the overall CRIES score after the training programme in the comparison 'external location' vs. 'secondary school location'. The Cohen effect is stronger in the external location.
- In the evaluation of CRIES TRT School 2018-2023, a significant difference in the improvement of the CRIES score between male and female participants was still found. The Cohen effect is still greater for the male participants (d=0.50) than for the female participants (d=0.31), but the difference between the two groups is no longer significant. A significant improvement in the CRIES values can now be determined for both groups.
- The new cases (n=44) of female participants from the period 2023-2024 have led to a significant improvement in the CRIES score values for the group of female participants. A separate evaluation of the new cases (n=80) from the period 2023-2024 shows that the CRIES scores of female participants (n=44) in these cases have improved above average compared to the older cases.

Zusammenfassend sind

die durchschnittlichen CRIES-Werte signifikant geringer nach dem TRT-Training

insb.für Teilnehmer*innen mit PTBS zu Baseline ohne PTBS aber auch Verschlechterungen

unbegleitete Minderjährige profitieren am meisten

größere Effekte wurden in externen TRT-Trainingssettings beobachtet

Effekte sind größer bei Burschen, wenngleich nicht signifikant

in der ersten Auswertung 2023 noch deutlicher (und signifikant)

5 Conclusion: AFYA results in context of systematic review results

systematische Übersicht und Primärdatenanalyse zeigen konsistente Ergebnisse

wenngleich Limitationen (unkontrolliertes Studiendesign, Mangel an Informationen zu Modifikatoren etc.) in den AFYA-Daten vorliegen: eindeutige Effekte

This report presents the findings of a systematic review and a national evaluation of the Teaching Recovery Techniques (TRT) programme: the results show consistent effects across studies. The evidence supports the TRT programme as an effective, scalable, and low-cost intervention for reducing trauma symptoms among refugee children and adolescents. TRT was implemented by AFYA in 2018: 1,426 children and adolescents have been in TRT-programmes since then, of which data on 18 variables from 372 participants are available. The AFYA results align with results from studies in other countries. However, the large effects must be seen with caution due to the limitations of the Austrian data: the uncontrolled study design that is more prone to bias than RCTs, the use of only one survey instrument (CRIES) and the lack of information on modifying factors (such as the residential status). Still, the effects of TRT have also been observed in RCTs, as presented in this report.

größere Effekte bei stärker Traumatisierten wie Unbegleitete Minderjährige

gute Ergebnisse in Ö: intensive Beziehungsarbeit, Integration von TRT im Rahmen der Schule, muttersprachliche TRT-Trainer*innen

The larger effects observed in unaccompanied minors (URM) might be explained by their higher exposure to traumatic events during refuge alone and their suffering from isolation due to lack of social capital (family). The eventual difference between effects in girls versus boys, also observed in some other studies, should not be overinterpreted, since there are far less girls in the samples than male participants. The data might not be representative. However, the strong effects observed in the Austrian data might be explained by contextual factors, such as the TRT-programme in the institutional setting of schools with very few losses-to follow-up, the exclusively native TRT trainers, and the specific focus of the TRT sessions on building trust and relationships.

Trauma behindert Lernerfolge
TRT sollte daher zeitnahe erfolgen: Gesundheitsförderung und Prävention

It is well known, based on good evidence and well researched by neuropsychologists that trauma hinders learning and integration [57]. Language and school learning is impossible in a stage of psychological impairment. For that reason, early interventions shortly after arrival would be a necessity for mental health in children and adolescents, but also adults. The TRT-programmes in Austria and elsewhere intend to promote health and prevent mental diseases.

Schlussfolgerung: kostengünstige Gruppenintervention

To conclude,

- The TRT-programme can be considered a very cost-effective, low budget, cultural-sensitive group intervention for health promotion and prevention.

Identifikation von schwerwiegend Traumatisierten

- This primary intervention can support the identification of children and adolescents who might need more and individual therapy.

Screening und breiter Einsatz in Schulsetting empfohlen

- Screening for trauma in all arriving children and adolescents and offering the intervention more regularly in school settings as early as possible is therefore recommended. As a consequence, the training and employment of health promoters from migrant communities is needed on a larger scale.

Forschungsbedarf: Langzeitergebnisse, modifizierende Faktoren

- Future accompanying research should strengthen the evidence base with longer-term outcomes, explore modifying and contextual effect factors, and enhance inclusion of underrepresented groups such as girls.

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Appendix A

Further outcome measures (used once only each in the identified studies)

The Daily Stressors Scale for Young Refugees (DSSYR)

DSSYR is a 7-item self-report questionnaire that measures to what extent material stressors (insufficient housing, medical care, clothing/food and money) were experienced by the participants during the previous month; the questionnaire uses a five-point Likert scale from 1 (not) to 5 (very much) [20, 28].
No MID could be identified.

The Child and Youth Resilience Measure (CYRM-12)

Resilience is measured by CYRM-12, that is a 12-item self-report measure exploring the resources, i.e., individual, relational, communal and cultural, available to youth, that may bolster their resilience. It uses a 5-point Likert-scale ranging from 1 (not at all) to 5 (a lot), where higher scores equal to higher degree of higher resilience [20, 28].
No MID could be identified.

Generalised Anxiety Disorder (GAD)

The GAD-7 is a 7-item measure developed to screen for generalised anxiety disorder. It has, however, also frequently been used to assess the severity of more general anxiety symptoms. Individual items (e.g., feeling nervous, anxious or on edge) are rated according to the frequency of their occurrence during the past 2 weeks (Not at all, Several days, More than half the days, Nearly every day). Total scores on the scale range from 0 to 21, with cut-off scores of 5, 10 and 15 for mild, moderate and severe symptoms, respectively [27, 28, 34].

MID is estimated 4 points on the GAD-7 total score [58].

General Self Efficacy scale (GSE)

The General Self-Efficacy (GSE) scale is a 10-item measure that assesses the strength of individuals' beliefs in their own ability to respond to difficult situations and to deal with obstacles or setbacks. Individual items (e.g., I can always manage to solve difficult problems if I try hard enough) are rated according to how true the statement is for that individual (Not at all true, Hardly true, Moderately true, Exactly true). Total scores range from 10 to 40, with a higher score indicating more self-efficacy [27, 33, 34].

No MID could be identified.

The Montgomery–Åsberg Depression Rating Scale Self-report (MADRS-S)

MADRS-S is a 9-item scale widely used in primary care (in Sweden). Question nine is assessing suicidal ideation and intention [33].

MID threshold ranges from 1.6 to 1.9 [59].

Adolescent Dissociative Experiences Scale (A-DES)

A-DES is a 30-item self-report instrument and measures the symptoms of dissociation as experienced and reported by adolescents. Its items survey dissociative amnesia, absorption and imaginative involvement (including confusion between reality and fantasy), depersonalization, passive influence/ interference experiences, and identity alteration. The A-DES is scored by summing items scores and dividing by 30 (the number of items). Overall scores can range from 0-10. A cut-off of ≥ 4 indicates the probability of a clinical diagnosis of dissociation [17, 39].

No MID could be identified.

Child and adolescent trauma screen (CATS)

The self-report CATS has two parts: the first part is a 15-item trauma history checklist, where the participants marks 'yes' or 'no' to a list of trauma exposures. The second part is a 20-item DSM-5 PTSD symptom scale, with symptoms rated from 0 (*never*) to 3 (*almost always*). A symptom change on the self-report CATS is being recorded.

No MID could be identified.

Child Posttraumatic Cognitions Inventory – short version (CPTCI-S)

The CPTCI-S is a 10-item questionnaire (25 items in the long version) measuring perceptions of two subscales "permanent and disturbing change" and fragile person in a scary world". Statements on scary events are rated on a four-point scale according to agreements (don´t agree at all, don´t agree a bit, agree a bit, agree a lot) [42, 43].

No MID could be identified.

The Screen for Childhood Anxiety-Related Disorders (SCARED)

SCARED is a child self-report and caregiver-report instrument to screen children aged 8–18 with anxiety disorders. A total of 41 items reflective of the DSM-IV criteria for anxiety disorders in childhood ask how the child may have felt over the previous 3 months on a three-point scale (not true or hardly ever true to very true or often true). The scale yields five subscales: panic disorder or significant somatic symptoms, generalised anxiety disorder, separation anxiety, social anxiety disorder, and significant school avoidance. A total score 25 may indicate the presence of an anxiety disorder [30].

A 3-point difference corresponding to at least a 5% score difference might be defined as MID [60].

The Child PTSD Symptom Scale (CPSS-I)

The CPSS-I is a semi-structured diagnostic interview which assesses the history of traumatic experiences (to identify an index trauma), followed by 20 items assessing DSM-5 PTSD symptoms and 7 items assessing impairment (relating to symptoms). Items are rated by the interviewer on a scale from 0 (*not at all*) to 4 (*6 or more times a week/almost always*) [29].

No MID could be identified.

Short Mood and Feeling Questionnaire (SMFQ)

The SMFQ is a 13-item measure of depression symptoms, with each item rated on a 0 (*true*) to 2 (*not true*) scale [29].

No MID could be identified.

Revised children´s manifest anxiety scale (RCMAS)

Measures the level and nature of anxiety, as experienced by children using a simple yes-or-no response format. RCMAS is a 37-item inventory that assesses a variety of anxiety symptoms.

No MID could be identified.

War trauma questionnaire (WTQ)

The WTQ is a 28-item, self-report measure to screen for background variables when studying refugees' mental health.

Appendix B

Evidence tables of individual studies included for clinical effectiveness and safety

Table A - 1: TRT: Results from randomised controlled trials

Author, year	Hasha 2019 [21] Hasha 2022 [37]	Rondung 2022 [34]	Barron 2016 [39]	Qouta 2012 [40] Diab 2015 [41] Kangaslampi 2016 [42]
Country	Norway	Sweden	Palestine	Palestine
Sponsor	Nowegian Research Council	Kavli Trust	Children and War Foundation	Finish Academy of Science
Intervention/Product	TRT	TRT	TRT	TRT
Comparator	Delayed intervention	Waiting list	Waiting list	Waiting list
Study design	RCT	Pilot RCT	RCT	Cluster RCT
Number of pts	38 vs 38	14 vs 1	79 vs 75	242 vs 240
Inclusion criteria	≥ 16 y IES-R ≥ 37, GHQ-12 ≥ 25	14-20 y, URM PTSD ≥ 17	Palestinian school children 11-15 y PTSD ≥ 17	Palestinian school children 10-13 y
Age of patients (yrs)	Ø 33 (±10.4) vs 33 (±10.7)	Ø 17.73 (16-20)	Ø 13.6 (±0.8) vs 13.4 (±0.8)	11.3 (±0.7)
Follow-up (months)	3 months	3 months	2 months	6 months
Loss to follow-up (n) Or withdrawal	41	10	15	78
Outcomes: Efficacy				
Reduction in PTSD measured in CRIES-8 or CRIES-13 score: Proportion (%) of pts pre ≥17 PTSD vs. post < 17 PTSD	-	n.r	29.41%	-
Reduction in PTSD measured in CRIES-8 or CRIES-13 score: Absolute values	-	CRIES-8 T1: 31.7 (±12.1) T2: 28.6 (±15.7) T3: 19.4 (±9.8)	CRIES-13 T1: 25.6 (±7.1) vs 24.7 (±5.5) T2: 18.6 (±8.8) vs 24.2 (±8.0)	CRIES-13 T1: 32.8 (±9.6) vs 27.8 (±10.6) T2: 27.9 (±10.5) vs n.r T3: 25.9 (±11.0) vs 27.4 (±11.6) T 4: 24.9 (±9.8) vs 25.8 (±9.2) (girls/boys) T1: 33.5 (±8.5)/32.1 (±10.6) vs 26.9 (±10.4)/28.6 (±10,8)

Author, year	Hasha 2019 [21] Hasha 2022 [37]	Rondung 2022 [34]	Barron 2016 [39]	Qouta 2012 [40] Diab 2015 [41] Kangaslampi 2016 [42]
				T2: 27.3 (±11.7)/24.6 (±10.3) vs 28.2 (±12.2)/26.6 (±10.9) T3: 27.0 (±10.3)/21.1 (±8.2) vs 26.9 (±9.5)/24.5 (±8.7)
Cantril Ladder for Life Satisfaction (LS) after TRT	-	T1: 5.1 (±3.1) T2: 7.4 (±2.9) T3: 8.6 (±1.8)	-	-
IES-R (baseline, 6 weeks, 12 weeks)	T1: 47.8 (±13.6) vs.47.0 (±13.8) T2: 40.3 (±12.8) vs. 41.o (±17.0) ns T3: -10.7 (-14.8 to -6.6) I+C combined	-	-	-
GHQ-12 (baseline, 6 weeks, 12 weeks)	T1: 17.1 (±6.6) vs 15.0 (±7.0) T2: 10.7 (± 5.2) vs 14.0 (±7.0) ss T3: -3.3 (-5.5 to -1.5) I+C combined	-	-	-
BPI (baseline, 6 weeks, 12 weeks)	T1: 3.6 (±1.9) vs. 3.6 (±1.7) T2: 3.6(±2.2) vs 3.6 (±1.7) ns T3: -0.6 (1.2 to 0.0)	-	-	-
PHQ-9 or PHQ-8	-	PHQ-9 T1: 12.3 (±5.6) T2: 7.4 (±5.3) T3: 9.6 (±7.2)	-	-
Reduction in PTSS measured in CATS-S: self-report CATS-C: caregiver-report Absolute values	-	-	-	-
CPTCI-S	-	-	-	T1: 54.9 (±12.3) vs 55.1 (±11.5) T2: 53.3 (±12.2) vs n.r T3: 52.2 (±11.5) vs 50.7 (±11.8) T4: 51.9 (±10.4) vs 51.3 (±12.8)
GAD-7	-	T1: 8.6 (±5.4) T2: 5.1 (±2.1) T3: 5.1 (±2.6)	-	
DSRS	-	-	T1: 16.3 (±4.9) vs 16.2 (±5.7) T2: 14.7 (±4.3) vs 16.2 (±5.5)	(girls/boys) T1: 13.2 (±4.6)/12.2 (±4.6) vs 12.0 (± 4.6)/12.7 (±4.8) T2: 14.3 (±5.7)/13.2 (±5.2) vs 13.3 (±4.4)/13.5 (±5.8) T3: 13.6 (±5.0)/14.3 (±4.8) vs 13.2 (±4.9)/ 13.7 (±5.1)

Author, year	Hasha 2019 [21] Hasha 2022 [37]	Rondung 2022 [34]	Barron 2016 [39]	Qouta 2012 [40] Diab 2015 [41] Kangaslampi 2016 [42]
SDQ	-	-	-	(girls/boys) T1: 9.9 (±4.7)/9.3 (±5.2) vs 8.4 (±3.9)/ 10.8 (±4.7) T2: 8.7 (±4.5)/9.5 (±4.9) vs 7.0 (±3.9)/8.8 (±4.4) T3: 8.9 (±4.2)/11.0 (±5.0) vs 8.6 (±3.9)/10.6 (±4.5)
ADES	-	-	T1: 3.9 (±1.9) vs 4.1(±2.3) T2: 3.9 (±2.0) vs 4.5 (±2.4)	-
Outcome: Safety				
Complications & adverse events, n (%)	n.r.	n.r	n.r	n.r
Outcome: Costs				
Cost per child/ adolescent	-	-	$ 38.68	-
Cost per benefit on PTSD	-	-	$ 1,121.52	-

Table A - 2: TRT: Results from randomised controlled trials

Author, year	Pfeiffer 2018 [43]	El-Khani 2021 [30]	Ooi 2016 [32]
Country	Germany	Lebanon	Australia
Sponsor	World Childhood Foundation	Economic and Social Research Council & Children and War Foundation & United Nations Office on Drugs and Crime	Curtin Univ School of Psychology & Australian Health Promotion Foundation
Intervention/Product	TRT	TRT	TRT
Comparator	Standard of Care	TRT + Parenting, Waiting list	Waiting list
Study design	RCT	three-armed RCT	Cluster RCT
Number of pts	50 vs 99	38 (TRT) vs 43 (TRT-Parenting) vs 40 (WL)	50 vs 37
Inclusion criteria	13-21 y, UCM PTSS ≥ 19 (CATS)	9-12 y, PTSS ≥ 17 (CRIES)	10-17 y, PTSD 4-38 (UCLA9
Age of patients (yrs)	Ø 17.0 (±1.11) vs 16.9 (±0.76)	Ø children n.r.	Ø 13. (±1.5) vs 12.1 (±1.75)
Follow-up (months)	2 months	3 months	3 months
Loss to follow-up (n) Or withdrawal	5		14
Outcomes: Efficacy			
Reduction in PTSD measured in CRIES-8 or CRIES-13 score: Proportion (%) of pts pre ≥17 PTSD vs. post < 17 PTSD	-	n.r.	n.r.
Reduction in PTSD measured in CRIES-8 or CRIES-13 score: Absolute values	-	CRIES-13: Intrusion T1: 13.7 (±3.8) vs 15.8 (±3.4) vs 13.5 (±4.0) T2: 8.9 (±4.2) vs 7.7 (±4.0) vs 11.0 (±3.9) T3: 5.4 (±4.3) vs 3.8 (±2.5) vs 8.7 (±4.1) CRIES-13: Avoidance T1: 13.3 (±3.8) vs 14.0 (±3.8) vs 12.8 (±4.0) T2: 9.7 (±5.2) vs 8.4 (±5.0) vs 10.9 (±3.9) T3: 2.7 (±5.9) vs 4.1 (±3.1) vs 8.9 (±4.7) CRIES-13: Arousal T1: 12.0 (±5.6) vs 13.8 (±6.3) vs 12.1 (±5.7) T2: 7.8 (±5.3) vs 8.7 (±3.9) vs 12.9 (±5.8) T3: 6.2 (±4.7) vs 4.9 (±3.5) vs 10.2 (±4.7)	CRIES-13 T1: 23.0 (±10.5) vs 17.9 (±11.9) T2: 15.9 (±9.6) vs 15.7 (±8.8) T3: 12.7 (±10.2) vs 14.2 (±11.1)
Cantril Ladder for Life Satisfaction (LS) after TRT	-	-	-
IES-R (baseline, 6 weeks, 12 weeks)	-	-	-
GHQ-12 (baseline, 6 weeks, 12 weeks)	-	-	-
BPI (baseline, 6 weeks, 12 weeks)	-	-	-
PHQ-9 or PHQ-8	PHQ-8: T1: 11.5 (±0.7) vs 11.5 (±0.7)	-	-

Author, year	Pfeiffer 2018 [43]	El-Khani 2021 [30]	Ooi 2016 [32]
	T2: 8.3 (±0.8) vs 11.8 (±0.8)		
Reduction in PTSS measured in CATS-S: self-report CATS-C: caregiver-report Absolute values	CATS-S: T1: 29.9 (±1.2) vs 31.8 (±1.2) T2: 23.5 (±1.8) vs 30.3 (±1.7) CATS-C: T1: 18.3 (±1.5) vs 19.4 (±1.5) T2: 18.4 (±1.4) vs 19.7 (±1.4)	-	-
CPTCI-S	T1: 13.3 (±0.9) vs 14.1 (±0.9) T2: 9.2 (±1.1) vs 12.8 (±1.1)	-	-
GAD-7	T1: 13.3 (±0.9) vs 14.1 (±0.9) T2; 9.2 (±1.1) vs 12.8 (±1.1)	-	-
DSRS	-	T1: 13.3 (±5.9) vs 13.6 (±5.6) vs 11.3 (±6.5) T2: 9.7 (±4.7) vs 8.4 (±5.3) vs 11.8 (±4.0) T3: 10.6 (±5.6) vs 8.7 (±4.3) vs 12.9 (±6.2)	T1: 10.9 (±5.3) vs 9.2 (±4.6) T2: 8.7 (±5.5) vs 8.8 (±4.8) T3: 8.3 (±4.5) vs 8.0 (±5.1)
SDQ	-	T1: 15.6 (±4.5) vs 16.8 (9 (±5.2) vs 15.0 (3.6) T2: 14.6 (±4.7) vs 12.8 (±4.1) vs 14.4 (±4.4) T3: 13.9 (±5.2) vs 14.2 (414.5.15.0) vs 14.9 (414.5.14.1)	SDQ-psychosocial functioning T1: 7.3 (±3.6) vs 7.5 (±4.2) T2: 5.8 (±2.8) vs 5.3 (±4.0) T3: 5.3 (±3.6) vs 4.0 (±3.0) SDQ prosocial behavior T1: 8.7 (±1.6) vs 8.3 (±1.6) T2: 8.7 (±1.3) vs (8.5 (±2.0) T3: 8.6 (±1.7) vs 9.2 (±0.8)
ADES	-	-	-
SCARED	-	T1: 34.2 (±13.2) vs 35.1 (±12.1) vs 34.7 (±13.7) T2: 22.6 (±14.3) vs 22.9 (20.9 (±8.6) 12.1) vs 27.0 (±13.3) T3: 22.7 (20.9 (± 8.6) 14.8) vs 20.9 (±8.6) vs 31.9 (±14.0)	-
Outcome: Safety			
Complications & adverse events, n (%)	n.r.	n.r	n.r
Outcome: Costs			
Cost per child/ adolescent	-	-	-
Cost per benefit on PTSD	-	-	-

Table A - 3: TRT: Results from observational studies (before-after case series)

Author, year	Yavna 2024 [36]	Solhaug 2023 [18]	Durbeej 2024 [38]	Sarkadi 2018 [19]	Ehntholt 2005 [44]
Country	Ukraine	Norway	Sweden	Sweden	UK
Sponsor	UNICEF	Norwegian Council of Mental Health & Dam Foundation	EU Horizon2020	n.r.	n.r
Intervention/Product	TRT	TRT	TRT	TRT	TRT
Study design	Pre-post design	Pre-post design	Pre-post design	Pre-post design	Pre-post design with control group
Number of pts	6877 C/A received TRT: 1798 with both quest.	151 URM received TRT 147 responded: 85 with 3, 41 with 2, 21 with 1 questionnaire	246 C/A received TRT 55 analyzed	60 received TRT 55 with 1, 46 with 2 question-naire	26 received TRT 15 with pre-post questionnaire 8 with 2 months FU
Inclusion criteria	C/A, PTSD ≥ 17	URM PTSD ≥ 17	PTSD ≥ 17	URM PTSD ≥ 17	Children
Age of patients (yrs)	7-23 y	Ø 16.61 (11-23) y	Ø 15.5 (±3)	13-18 y	11-15, war trauma (WTQ)
Follow-up (months)	ca 1 month	3 months	3 months	3-6 months	6 weeks – 2 months
Loss to follow-up, n or withdrawal	5079	4-66	191	5-14	0
Outcomes: Efficacy					
Reduction in PTDS measured in CRIES-8 score: Proportion (%) of pts pre ≥17 PTDS vs. post < 17 PTDS	All: 74 (m), 66 (f) 7-10y: 71 (m), 61 (f) 11-14y: 78 (m), 73 (f) 15-18y: 71 (m), 63 (f) 19-13y: 80 (m), 54 (f)	n.r	All: 55 34.7 recovered 0.0 improved 65.3 unchanged 0.0 deteriorated	All: 46 21.7 recovered 6.0 improved 63.1 unchanged 8.7 deteriorated	-
Reduction in PTDS measured in CRIES-8 score: Absolute values (baseline, 6 weeks, 12 weeks)	All: -14 (-31 to +12) (m) -13 (-34 to +18) (f)	n.r	T1: 23.9 (±5.1) T2: 11.7 (±6.0) T3: 11.9 (±6.1) ss	T1: 29.0 (±6.3) T2: 25.9 (±5.9) T3: n.r.	-
Cantril Ladder for Life Satisfaction (LS) after TRT	-	T1: 4.34 (±2.79) T2: 4.77 (±2.52) ss T3: 5.12 (±2.76) ns TRT practice and Asylum status with ss association with increase in LS	-	-	-

Author, year	Yavna 2024 [36]	Solhaug 2023 [18]	Durbeej 2024 [38]	Sarkadi 2018 [19]	Ehntholt 2005 [44]
IES-R	-	-	-	-	Total T1: 38.6 (±6.9) T2: 31.5 (±7.4) T3: 39.1 (±7.0)
GHQ-12	-	-	-	-	
DSRS	-	-	-	-	T1: 11.3 (±3.6) T2: 12.5 (±3.5) T3: 10.5 (±4.4)
SDQ difficulties score Absolute changes	-	-	T1: 14.6 (±5.5) T2: 12.2 (±6.2) T3: 10.4 (±5.4) ss	-	-
SDQ difficulties score Proportion (%) of pts	-	-	All: 55 20.4 recovered 14.3 improved 63.2 unchanged 4.1 deteriorated	-	-
MADRS-S for Depression Absolute changes (baseline, 6 weeks, 12 weeks)	-	-	-	T1: 29.3 (±10.3) T2: 23.4 (±10.5) T3: n.r.	-
MADRS-S for Depression Proportion (%) of pts	-	-	-	All: 46 32.6 recovered 2.2 improved 60.9 unchanged 4.3 deteriorated	-
Outcomes: Safety					
Complications & adverse events, n (%)	n.r.	n.r	n.r	n.r	n.r
Outcomes: Costs					
Cost per child/ adole-scent	$50 (incl. cascade training, payment of facilitators, NGO administration)	-	-	-	-
Cost per benefit on PTSD	$119	-	-	-	-

CRIES – Children´s revised impact of event scale, F - female, m - male, LS - Life Satisfaction, pts – participants, PTSD - Post-traumatic stress disorder

Risk of bias tables

Table A - 4: Risk of bias – study level (case series), IHE checklist [23]

Study reference/ID	Yavna 2024 [36]	Solhaug 2023 [18]	Durbeej 2024 [38]	Sarkadi 2018 [19]	Ehntholt 2005 [44]
Study objective					
1. Was the hypothesis/aim/objective of the study clearly stated?	Partial	Yes	Partial	Yes	Yes
Study design					
2. Was the study conducted prospectively?	Yes	Yes	Yes	Yes	Yes
3. Were the cases collected in more than one centre?	Yes	Yes	Yes	Yes	Yes
4. Were patients recruited consecutively?	Yes	Unclear	Yes	Yes	No
Study population					
5. Were the characteristics of the patients included in the study described?	Yes	No	Yes	Partial	Yes
6. Were the eligibility criteria (i.e. inclusion and exclusion criteria) for entry into the study clearly stated?	Partial	Yes	Yes	Yes	Yes
7. Did patients enter the study at a similar point in the disease?	Yes	Yes	Yes	Yes	Yes
Intervention and co-intervention					
8. Was the intervention of interest clearly described?	No	Yes	Yes	Yes	Yes
9. Were additional interventions (co-interventions) clearly described?	No	No	No	No	No
Outcome measures					
10. Were relevant outcome measures established a priori?	Yes	Yes	Yes	Yes	Yes
11. Were outcome assessors blinded to the intervention that patients received?	No	No	Unclear	Unclear	No
12. Were the relevant outcomes measured using appropriate objective/subjective methods?	Yes	Yes	Yes	Yes	Yes
13. Were the relevant outcome measures made before and after the intervention?	Yes	Yes	Yes	Yes	Yes
Statistical Analysis					
14. Were the statistical tests used to assess the relevant outcomes appropriate?	Yes	Yes	Yes	Yes	Yes
Results and Conclusions					
15. Was follow-up long enough for important events and outcomes to occur?	No	No	No	No	No
16. Were losses to follow-up reported?	Yes	Yes	Yes	Yes	Yes

Study reference/ID	Yavna 2024 [36]	Solhaug 2023 [18]	Durbeej 2024 [38]	Sarkadi 2018 [19]	Ehntholt 2005 [44]
Study objective					
17. Did the study provide estimates of random variability in the data analysis of relevant outcomes?	Yes	Yes	Yes	Yes	Yes
18. Were the adverse events reported?	Yes	No	Yes	Yes	No
19. Were the conclusions of the study supported by results?	Yes	Yes	Yes	Yes	Yes
Competing interests and sources of support					
20. Were both competing interests and sources of support for the study reported?	Yes	Yes	Yes	Yes	No
Overall Risk of bias	15/20	14.5/20	17/20	17/20	15/20

Table A - 5: Risk of bias – study level (randomised studies), see [22]

Trial	Bias arising from the randomization process	Bias due to deviations from intended interventions	Bias due to missing outcome data	Bias in measurement of the outcome	Bias in selection of the reported result	Overall risk of bias
Hasha 2019 [21] Hasha 2022 [37]	Low	Low	Low	Some concern	Low	Low to Some concern
Rondung 2022 [34]	High	Some concern	Some concern	Some concern	Low	Some concern
Barron 2016 [39]	Some concern	Low	Low	Some concern	Low	Low to some concern
Qouta 2012 [40] Diab 2015 [41] Kangaslampi 2016 [42]	Some concern	Low	Low	Some concern	Low	Low to some concern
Pfeiffer 2028	Low	Low	Low	Some concern	Low	Low to some concern
El-Khani 2021 [30]	Low	Low	Low	Some concern	Low	Low to some concern
Ooi 2016 [32]	Low	Low	Low	Some concern	Low	Low to some concern

Literature search strategies

Search strategy for Cochrane

Search Name: Trauma therapy for refugees	
Search date: 01.03.2025	
ID	Search
#1	Trauma (453)
#2	Refugees OR (forced) migrants (6)
Total hits: 6	

Search strategy for Medline

Search Name: Trauma therapy for refugees	
Search date: 01.03.2025	
ID	Search
#1	Trauma (1,502,758)
#2	Refugees OR forced migrants (3,717)
#3	Post-traumatic stress disorder (PTSD) (1,336)
#4	Teaching Recovery Technique (TRT) (10)
#4	PTSD AND TRT (111)
#5	Combination #1-#4 (16)
Total hits: 16	

Search strategy for HTA-INATHTA

Search Trauma therapy for refugees	
Search date: 01.03.2025	
ID	Search
1	Trauma
2	Refugees OR forced migrants
Total hits: 1	

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