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a randomized controlled trial

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Skills training followed by either EMDR or narrative therapy for posttraumatic stress disorder in adult survivors of childhood abuse: a randomized controlled trial

I. Wigard^{a,b}, K. Meyerbröker^{b,c,d}, T. Ehring^e, M. Topper^{b,f}, A. Arntz^b and P. Emmelkamp^b

^aParnassia Groep, Amsterdam, the Netherlands; ^bDepartment of Clinical Psychology, University of Amsterdam, Amsterdam, the Netherlands; ^cDepartment of Clinical Psychology, Utrecht University, Utrecht, the Netherlands; ^dAltrecht Academic Anxiety Centre, Utrecht, the Netherlands; ^eDepartment of Psychology, LMU Munich, Munich, Germany; ^fGGZ-Noord-Holland-Noord, Alkmaar, the Netherlands

ABSTRACT

Background: Individuals suffering from PTSD following childhood abuse represent a large subgroup of patients attending mental health services. The aim of phase-based treatment is to tailor treatment to the specific needs to childhood abuse survivors with PTSD with a Skills Training in Affective and Interpersonal Regulation (STAIR) phase, in which emotion dysregulation and interpersonal problems are targeted, and a trauma-focused phase.

Objective: The purpose of this study was to compare STAIR + Eye Movement Desensitization and Reprocessing (EMDR) vs. STAIR + Narrative Therapy (NT) as treatments for PTSD following childhood-onset trauma in a routine clinical setting.

Method: Sixty-eight adults were randomly assigned to STAIR/EMDR (8 STAIR-sessions followed by 12 EMDR-sessions) or STAIR/NT (8 STAIR-sessions followed by 12 NT-sessions). Assessments took place at pre-treatment, after each treatment phase and at 3 and 12 months post-intervention follow-up. Primary outcomes were interviewer-rated and self-reported symptom levels of PTSD. Secondary outcomes included symptom levels of depression and disturbances in emotion regulation and interpersonal skills.

Results: Multilevel analyses in the intent-to-treat sample indicated that patients in both treatments improved substantially on PTSD symptom severity (CAPS: $d = 0.81$ to 1.29 ; PDS: $d = 1.68$ to 2.15), as well as on symptom levels of depression, anxiety, emotion regulation, dissociation and interpersonal skills. Effects increased or were maintained until 12-month follow-up. At mid-treatment, after STAIR, patients in both treatments improved moderately on PTSD symptom severity (PDS: $d = 1.68$ to 2.15), as well as on symptom levels of depression (BDI: $d = .32$ to $.31$). Symptoms of anxiety, emotion dysregulation, interpersonal problems and dissociation were not decreased after STAIR. There were no significant differences between the two conditions on any outcome.

Conclusion: PTSD in adult survivors of childhood interpersonal trauma can effectively be treated by phase-based interventions using either EMDR or NT in the trauma-processing phase.

Trial registration: [ClinicalTrials.gov](https://clinicaltrials.gov/ct2/show/study/NCT01443182) identifier: NCT01443182..

Entrenamiento de habilidades seguido de EMDR o terapia narrativa para el trastorno de estrés postraumático en adultos sobrevivientes de abuso en la infancia: un ensayo controlado aleatorizado

Antecedentes: Las personas que sufren de TEPT después de la niñez representan un gran subgrupo de pacientes que asisten a servicios de salud mental en general, así como también a servicios especializados para TEPT. El objetivo del tratamiento basado en fases es adaptar el tratamiento a las necesidades específicas de los sobrevivientes de abuso en la infancia con TEPT con una fase de Entrenamiento de Habilidades en Regulación Afectiva e Interpersonal (STAIR por sus siglas en inglés), en la que se aborda la desregulación emocional y los problemas interpersonales y una fase centrada en el trauma, donde tiene lugar el procesamiento de las experiencias traumáticas.

Objetivo: El propósito de este estudio fue comparar STAIR + Desensibilización y Reprocesamiento por Movimientos Oculares (EMDR) vs. STAIR + Terapia Narrativa (TN) en adultos sobrevivientes de abuso físico y/o sexual en la infancia en un contexto clínico de rutina.

Método: Sesenta y ocho adultos fueron asignados aleatoriamente a una de las dos condiciones. En cada condición, el tratamiento consistió en un máximo de 20 sesiones (8 STAIR + 12 EMDR o 8 STAIR + 12 TN). Se realizaron evaluaciones ciegas antes del tratamiento, después de la fase STAIR, 2 semanas después de la última sesión (ej. Post tratamiento), y 3 y

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KEYWORDS

EMDR; trauma-focused cognitive behavioural therapy; posttraumatic stress disorder; STAIR; narrative therapy; childhood sexual abuse; childhood physical abuse; prolonged exposure

PALABRAS CLAVE

EMDR; terapia cognitiva conductual centrada en el trauma; trastorno de estrés postraumático; STAIR; terapia Narrativa; abuso sexual en la infancia; abuso físico en la infancia; exposición prolongada

HIGHLIGHTS

- The study directly compares Skills Training in Affective and Interpersonal Regulation (STAIR) followed by either EMDR or Narrative Therapy in the trauma-processing phase in routine clinical setting.
- The brief phase-based treatment was found to be effective in reducing both symptoms of PTSD as well as emotion regulation and interpersonal problems in survivors of childhood abuse.
- Posttraumatic Stress Disorder in adult survivors of childhood interpersonal trauma can effectively be treated by phase-based interventions using either EMDR or Narrative Therapy in the trauma-processing phase.

12 meses después del final del tratamiento. Las medidas de resultado primarias fueron los niveles de síntomas de TEPT calificados por el entrevistador y auto-reportadas. Las medidas de resultado secundarias incluyeron niveles de depresión y alteraciones en la regulación emocional y habilidades interpersonales.

Resultados: Los análisis multinivel en la muestra por intención de tratar indicaron que los pacientes mejoraban sustancialmente con ambos tratamientos en la gravedad de los síntomas de TEPT (CAPS: $d = 0.81$ a 1.29 ; PDS: $d = 1.68$ a 2.15), así como también en los niveles de síntomas de depresión, ansiedad, regulación emocional, disociación y habilidades interpersonales. Los efectos aumentaron o se mantuvieron hasta los 12 meses de seguimiento. A la mitad del tratamiento, después del STAIR, los pacientes en ambos tratamientos mejoraron moderadamente en la gravedad de los síntomas de TEPT (PDS: $d = 1.68$ a 2.15), así como también en los niveles de síntomas de depresión (BDI: $d = .32$ a $.31$).

1. Introduction

Posttraumatic stress disorder (PTSD) is a prevalent and disabling psychological disorder with onset after traumatic experiences. International guidelines recommend trauma-focused cognitive behaviour therapy (TF-CBT) and Eye Movement Desensitization and Reprocessing (EMDR) as first-line treatments for PTSD (American Psychological Association, 2017; NICE, 2018). TF-CBT and EMDR are both classified as trauma-focused treatments, i.e. interventions that are mainly focused on processing the memory of the trauma and/or its meaning, and both types of treatments have been found to be highly effective for PTSD following adult-onset trauma (Bisson et al., 2013; Chen et al., 2015; Cusack et al., 2016; Hoppen et al., 2023; Kip et al., 2023; Watts et al., 2013). Individuals suffering from PTSD following childhood abuse have traditionally been underrepresented in PTSD treatment outcome research in terms of the number and methodological quality of studies (Cusack et al., 2016; Ehring et al., 2014; Karatzias et al., 2019; Kip et al., 2023). However, they represent a large subgroup of patients attending mental health services in general as well as specialist services for PTSD (Farley & Patsalides, 2001; Kessler et al., 2017; Zayfert et al., 2005). Although PTSD following childhood abuse can be treated effectively, effect sizes are somewhat lower than typically found for PTSD treatment in other groups of trauma survivors (Ehring et al., 2014; Niemeyer et al., 2022). TF-CBT is generally considered to be the most empirically supported treatment due to the number and quality of the studies (Cusack et al., 2016; Ehring et al., 2014; Niemeyer et al., 2022). Survivors of childhood physical and/or sexual abuse often experience emotion regulation difficulties, disturbed self-concept, and relational difficulties in addition to PTSD symptoms (Cloitre et al., 2013; Karatzias et al., 2019). They experience these difficulties more often than PTSD patients without a history of childhood abuse (Gekker et al., 2018). Compared with patients with PTSD related to trauma in adulthood, they improve less on PTSD symptoms, emotion regulation and interpersonal functioning

(Karatzias et al., 2019). More recently, it was investigated whether patients with childhood interpersonal trauma responded differently to trauma-focused treatment than patients with other traumatic experiences (Wagenmans et al., 2018). Results showed that patients with childhood abuse trauma exhibited a comparable improvement after treatment as the group without a childhood abuse trauma. In another study, Boterhoven de Haan et al. (2020) compared EMDR with Imagery Rescripting (ImRs) in adult patients with PTSD from childhood trauma. ImRs and EMDR treatments were found to be effective in treating PTSD symptoms arising from childhood trauma, as well in reducing other symptoms such as depression and dissociation. Moreover, there is evidence that EMDR alone is an effective treatment for this patient group without focusing on emotion regulation strategies (Van Vliet et al., 2021).

Several authors have suggested that treatment efficacy and acceptability for patients with PTSD related to childhood abuse may be improved by providing phase-based treatments, whereby an initial non-trauma-focused phase (e.g. skills training) is followed by trauma-focused treatment (Cloitre et al., 2011). Coventry et al. (2020) found that multicomponent interventions, which can include phase-based approaches, were the most effective treatment package for managing PTSD in complex trauma, including childhood sexual abuse. Skills Training in Affective and Interpersonal Regulation (STAIR) followed by Narrative Therapy (NT)¹ as a variant of TF-CBT is one of several phase-based treatment programmes that were developed with the aim to tailor treatment to the specific needs of childhood abuse survivors with PTSD. STAIR/NT consists of a skills-training phase (STAIR), in which emotion dysregulation and interpersonal problems are targeted, and a trauma-focused phase, (Narrative Therapy) consisting of a modified version of prolonged exposure.

The efficacy of STAIR/NT has been investigated in two randomized controlled trials (Cloitre et al., 2010). Results show that the treatment led to significant improvement with high effect sizes in three problem

domains: PTSD symptoms, affect regulation problems, and interpersonal skills deficits. Importantly, STAIR/NT was found to be more effective than (a) a wait-list control group, (b) NT alone, and (c) STAIR alone. However, both RCTs were conducted at the treatment centre by the treatment approach developers. Other studies sought to determine whether this phase-based approach is more effective than an immediate trauma-focused approach in patients with childhood-trauma-related PTSD. Opriel et al. (2021) compared STAIR followed by Prolonged-Exposure to Intensified Prolonged Exposure (three times a week) and Prolonged Exposure (once a week) in patients with PTSD related to childhood abuse. They found that all three treatments resulted in large improvements in PTSD symptoms, emotion regulation, and interpersonal problems. The treatments did not significantly differ in symptom reduction post-treatment and at 1-year follow-up. Raabe et al. (2022) compared sixteen twice-weekly Imagery Rescripting sessions and sixteen twice-weekly Imagery Rescripting sessions preceded by eight weekly STAIR sessions, compared to a waiting list. They found that the two active treatments were both effective and did not significantly differ in symptom reduction on PTSD, depressive symptoms, emotion regulation and interpersonal problems. Although these studies did not convincingly show an additive effect of STAIR, there is evidence that STAIR/TF-CBT is at least equally effective to immediate TF-CBT and is therefore evidence-based option for clinical practice.

STAIR has also been used in combination with EMDR in one study (Van Vliet et al., 2021), where sixteen twice-weekly EMDR sessions preceded by eight twice-weekly STAIR sessions were compared to immediate EMDR (sixteen twice-weekly sessions) without STAIR. Results showed that STAIR/EMDR did not differ significantly from EMDR alone. To our knowledge, no study to date has directly compared STAIR-NT and STAIR-EMDR with the same number and frequency of sessions and session duration in routine setting. As the aim of phase-based treatment is to tailor treatment to the specific needs of childhood abuse survivors with PTSD with a skills-training phase (STAIR), in which emotion dysregulation and interpersonal problems are targeted, and a trauma-focused phase where processing of the traumatic experiences takes place, it is important to have a close examination of symptom change in the STAIR phase versus the processing phase.

The aims of the current study were (a) to replicate findings on the effectiveness of STAIR/NT in a pragmatic trial, i.e. conducted in a routine clinical setting following a realistic amount of training and supervision with consecutive patients, (b) to compare STAIR/EMDR and STAIR/NT as treatments for PTSD following childhood-onset trauma and (c) to

investigate the amount of symptom reduction during the STAIR phase vs. the trauma-focused phase.

2. Methods

2.1. Participants

Participants were recruited at three sites of an outpatient treatment centre (PsyQ) for patients with mental disorders between September 2011 to June 2016. The centre is a regular mental health institution that is publicly funded and offers treatment for patients with diverse economic and social background. The study was approved by the medical ethics committee of the University of Amsterdam (reg. nr. NL31098.018.10) and was registered at ClinicalTrials.gov (NCT01443182). A CONSORT diagram (Schulz et al., 2010) illustrating participant flow throughout the study is presented in Figure 1. In total, 92 participants were assessed for eligibility and 68 were randomized.

Participants had to meet the following inclusion criteria: (1) diagnosis of PTSD according to the DSM-IV-TR (APA, 2000), (2) having experienced repeated or chronic interpersonal trauma before the age of 17 (e.g. sexual or physical abuse), (3) at least 18 years of age, (4) sufficient fluency in Dutch to complete treatment and research protocol, (5) if prescribed anti-depressant medication, having been on a stable dose for at least 2 weeks before the beginning of treatment and agreeing to remain on this dose throughout treatment.

Participants were excluded in case of (1) psychiatric problems that might interfere with study participation or that require more intensive care than can be offered in the present study, including dementia, psychotic symptoms, severe suicidal behaviour (i.e. a suicide attempt during the past six months or acute suicidal ideations with serious intent to die with a specific plan for suicide and preparatory acts), and severe substance dependence, (2) current use of benzodiazepines.

2.2. Statistical power analysis

In line with earlier studies (Greene et al., 2008), the minimum clinical meaningful difference between the two active conditions on the primary clinical outcome measure was defined as a difference of 10 points on the CAPS. Thus, a difference ≥ 10 can be considered as clearly clinically meaningful. Assuming a standard deviation of about 20 points at each assessment, and a correlation between repeated assessments of .8 a 10-point difference between the two treatments in the mean change scores corresponds with an effect size $d = .79$. Powering the trial at 80%, and using a two-tailed significance level of .05, indicates that a total sample of $N = 54$ is needed. To compensate for

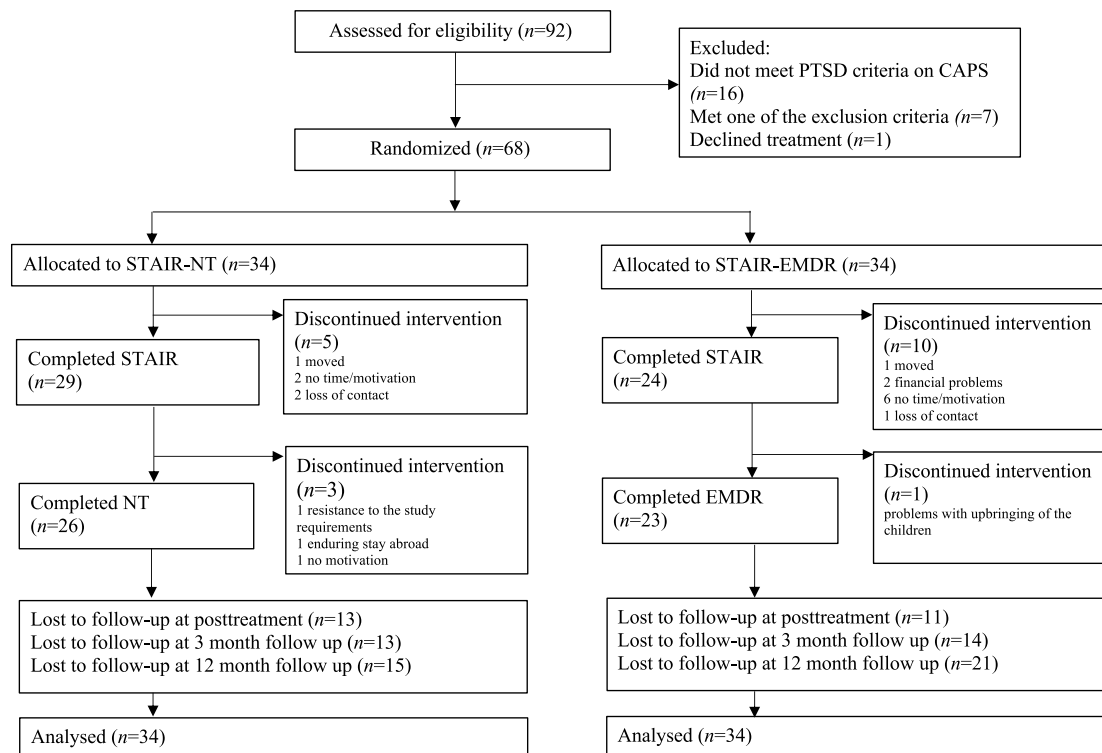


Figure 1. Flow diagram of recruitment and follow-up process.

(possible) study dropouts (estimated approximately 20%), we included $N = 68$ participants.

2.3. Measures

2.3.1. Primary outcomes

Clinician-Administered PTSD Scale (CAPS-IV). A diagnosis of PTSD was confirmed using the CAPS-IV (Blake et al., 1995).² The CAPS is a structured interview assessing core and associated symptoms of PTSD. It assesses the frequency and intensity of each symptom using standard prompt questions and explicit, behaviourally anchored rating scales. The CAPS yields both continuous and dichotomous scores for current and lifetime PTSD symptoms. High internal consistency ($\alpha = .80-.90$), and test-retest reliability ($r = .90-.98$) have been reported (Weathers et al., 2001). A CAPS score of 50 indicates at least moderate PTSD; 60, severe PTSD; and 80, extreme PTSD; scores of 20 or below in patients with PTSD indicate remission. The current study found a Cronbach's α reliability coefficient of .84.

Posttraumatic Diagnostic Scale (PDS). The PDS (Foa et al., 1997) was used to assess self-reported PTSD symptom severity based on DSM-IV-TR. Respondents are asked to rate the presence of each of the 17 symptoms on a scale from 0 ('not at all or only one time') to 3 ('5 or more times a week / almost always'). The PDS yields a total severity score (ranging from 0 to 51). In addition, three subscales scores representing intrusive re-experiencing, avoidance, and hyperarousal can be computed. The PDS has shown

high internal consistency ($\alpha = .95$), high test-retest reliability (correlation of .85) and decent diagnostic agreement with the PSS-I ($k = 0.57$; Powers et al., 2012). In the current study, Cronbach's α was .72.

2.3.2. Secondary outcomes

Beck Depression Inventory-II (BDI-II). The BDI-II (Beck et al., 1996) is a self-report measure of depressive symptoms. Respondents are asked to endorse 21 sets of statements varying in severity from 0 (e.g. 'I do not feel sad') to 3 (e.g. 'I am so sad or unhappy that I can't stand it'). The highest rating for each item is summed across all items to create a continuous measure of depressive symptoms. High internal consistency ($\alpha = .88-.92$), and test-retest reliability ($r = .93-.96$) have been reported, (Beck et al., 1996; Sprinkle et al., 2002). The current study found a Cronbach's α of .86.

Beck Anxiety Inventory (BAI). The Beck Anxiety Inventory (BAI; Beck et al., 1988) is a self-report measure designed to measure the occurrence and severity of symptoms of anxiety disorders. Respondents are asked to endorse 21 statements indicating how much they have been bothered by each symptom during the past week from 0 (not at all) to 3 meaning severely (i.e. 'I could barely stand it'). The BAI has yielded evidence supporting high internal consistency across both clinical ($\alpha = .91$) and nonclinical ($\alpha = .91$) samples (Bardhoshi et al., 2016). Cronbach's α was .91 in the current study.

Dissociative Experiences Scale (DES). The DES (Bernstein & Putnam, 1986) is a self-report measure

of symptoms of dissociation. Respondents are asked to endorse 28 statements that enquire about the experiences of amnesia, depersonalization, derealization, imaginative involvement and absorption. Respondents indicate to what extent they experience these symptoms on a scale from 0 to 100. The DES has shown high internal consistency ($\alpha = .70$), high test-retest reliability ($r = .84$) and good convergent validity in earlier research (Bernstein & Putnam, 1986). In the current study, Cronbach's α was .91.

Difficulties in Emotion Regulation Scale (DERS). The DERS (Gratz & Roemer, 2004) is a self-report measure of multiple aspects of emotion dysregulation. Respondents are asked to endorse 36 statements (e.g. 'when I'm upset, I have difficulty controlling my behaviors'), with responses ranging from 1 to 5, where 1 is almost never (0–10%), 2 is sometimes (11–35%), 3 is about half the time (36–65%), 4 is most of the time (66–90%), and 5 is almost always (91–100%). The DERS has shown high internal consistency ($\alpha = .93$), good test-retest reliability ($\rho I = .88, p < .01$) and convergent validity (Gratz & Roemer, 2004). Cronbach's α in the current study was .83.

Inventory of Interpersonal Problems (IIP). The short version of the IIP (Barkham et al., 1996; Horowitz et al., 1988) was used to measure the types of interpersonal problems that people experience and the level of distress associated with them. Respondents are asked to endorse 32 statements (e.g. 'I lose my temper too easily') on a 5-point Likert scale ranging from 0 – not distressed at all by this problem, to 4 – extremely distressed by this problem. The IIP has shown high internal consistency (ranging from $\alpha = 0.86$ to .90), and good test-retest reliability ($r = .71, p < .01$). The current study found a Cronbach's α of 0.84.

Additional measures. The Structured Clinical Interview for the DSM-IV (SCID-I; First et al., 1996) was used to assess the presence vs. absence of comorbid axis I disorders. The inter-rater reliability kappa values of the Axis I disorders vary from .61 to .83, with a mean Kappa of .71 (Lobbetael et al., 2011). The disorder-specific section of the Structured Clinical Interview for the DSM-IV Personality Disorders (SCID-II; First et al., 1997) was used to assess the presence vs. absence of Borderline Personality Disorder. The inter-rater reliability kappa value of the Borderline Personality Section has been reported as .91 (Lobbetael et al., 2011).

2.4. Procedure

Patients being referred for PTSD treatment to the three participating sites were invited to participate in the study after intake. They were then provided with more detailed information about participation. After written informed consent had been obtained, patients attended an assessment session that included the

structured interviews (SCID-I, SCID-II, CAPS) and completion of self-report questionnaires.

After baseline assessment, patients meeting inclusion criteria were randomly allocated to one of the two treatment conditions. Block randomization with randomly permuted block sizes was carried out by an independent researcher. Assessments were conducted at pre-treatment, mid-treatment (after Phase 1), post-treatment (2 weeks after last session of Phase 2), 3-month follow-up and 12-month follow-up. Assessors at all assessment points were blind to participants' assignment to the conditions. Assessors were trained in using the assessments interviews. Interrater reliability was not formally assessed, but monitored through weekly supervision led by the second and third author.

2.5. Treatment

Both treatment arms consisted of two phases. The first phase followed the STAIR manual (Cloitre et al., 2006), and consisted of eight individual sessions with one 60 min session per week. The aim of STAIR is to improve emotion regulation and interpersonal functioning. The first 4 sessions focus on enhancing emotion regulation skills, followed by 4 sessions on developing interpersonal skills.

In the second phase, participants received either NT or EMDR, depending on their allocated condition. *Narrative Therapy (NT)* consisted of 8–12 weekly 90 min sessions of exposure treatment following the NT manual provided by Cloitre et al. (2006). NT is based on prolonged exposure (Foa et al., 2000), with the following two modifications: (1) in vivo exposure to trauma stimuli was replaced with interpersonal skills practice, and (2) meaning analysis was introduced after the exposure in which abuse-related schemas embedded in the trauma narrative were identified and evaluated. *EMDR* consisted of 8–12 weekly 90 min sessions. The Dutch translation of the EMDR protocol by Shapiro (1995) was used to process traumatic experiences (De Jongh & Ten Broeke, 2013). In addition to the protocol, the advanced EMDR strategies 'Cognitive Interweaves' were used to facilitate trauma processing (Korn & Leeds, 2002).

All trial therapists were professionally trained and experienced in both CBT and EMDR. They received additional training in protocols they delivered, provided by external experts: one day STAIR training, one day NT training and one day EMDR training. They received every two weeks supervision provided by the first, third and last author and additional training by a registered EMDR supervisor. All treatment sessions were audiotaped. Treatment integrity was assessed by two independent raters who listened to 30 randomly selected session tapes (10 STAIR, 10 NT and 10 EMDR). Each tape was rated by both raters

independently on the modified adherence rater checklist scale by Cloitre and colleagues (STAIR and NT), and the modified adherence scale of EMDR. The average measure ICC for STAIR was 0.963 with a 95% confidence interval from 0.876 to 0.986. The average measure ICC for NT was 0.958 with a 95% confidence interval from 0.813 to 0.985. The average measure ICC for EMDR was 0.982 with a 95% confidence interval from 0.963 to 0.992. Protocol adherence was high and analysis of the rating scores indicated treatment conditions were statistically highly distinguishable from each other (see Table 1).

2.6. Data analytic approach

All analyses were carried out in SPSS (version 27). Group differences in demographic characteristics (age, gender, ethnicity, education level and partnership) and clinical (trauma duration, age of trauma, number of DSM IV-TR axis 1 disorders and DSM-IV-TR Borderline Personality disorder) characteristics were tested using χ^2 tests and independent samples *t*-tests.

Multilevel regression analyses were conducted to evaluate the effect of the intervention on symptom measures of PTSD, depression, anxiety, dissociation, emotion dysregulation and interpersonal problems. Results are based on intention-to-treat (ITT) analysis. The level-1 model included the time variables, which capture within-person change over time. In the level-2 model, between-person characteristics such as intervention condition were used to predict the slope estimates representing change in the dependent variables. Subject-specific random effects (i.e. random intercept and slope) were retained whenever they significantly contributed to the model. Bayesian Information Criterion (BIC; Burnham & Anderson, 2004) was used to determine the best-fitting model, with smaller values indicating a better fit of the model to the observed data. At level 1, three separate slopes using three time-varying covariates (McCoach & Kaniskan, 2010) were modelled with the mid-treatment and 3-month follow-up assessment as break-points. All participants started out receiving STAIR and the first slope modelled the general rate of change from the pre-treatment to mid-treatment assessment, i.e. in between STAIR and trauma-focused treatment. After STAIR participants received either NT or EMDR and the second slope modelled the rate of change following the mid-treatment assessment up to 3-month follow-up. The third slope modelled the rate of change following the 3-month follow-up up to 12-month follow-up. Contrast coding was used to include the evaluation of the categorical variable intervention condition (NT coded .5 and EMDR coded -.5). For the second and third slope, a slope by intervention condition interaction term was created to test a differential effect in the rate of change in the period

following the mid-treatment assessment. At level 2, a diagonal covariance structure was selected.

For the CAPS, no mid-treatment assessment was performed. For this measure, we therefore estimated a linear trend indicating the direction and rate of change, and a quadratic trend indicating whether the rate of change increased or decreased over time.

Cohen's *d* was used as an effect size and computed from the multilevel estimated means and observed standard deviations. Within-group effect sizes for each outcome measure were calculated by dividing the difference between pretreatment and any subsequent means by the standard deviation of each mean. To correct for dependence among these means, we calculated the correlations between the pre-treatment and subsequent scores (Feingold, 2013).

Between-group effect sizes from mid-treatment to 3-month follow-up and from 3-month follow-up to 12-month follow-up were calculated by subtracting the means and dividing the result by the pooled standard deviation, adjusting the calculation of treatment standard deviation for weighting the differences of the pre-post-means as proposed by Morris (2008). In this way, the intervention does not influence the standard deviation. In both calculations, the STAIR/NT group was treated as the control group.

In addition to multilevel regression analyses, we determined the clinical significance of treatment effects by calculating the percentage of participants reaching the criteria for reliable and clinically significant change. The guidelines and recommendations outlined by Wise (2004) were applied to the CAPS continuous scores. Reliable change was calculated while considering test-retest reliability for the CAPS ($r = .90$; Weathers et al., 2001). The threshold for clinical significance was set at 48.96 (Beidel et al., 2019). A Cox regression survival analysis was performed to examine the effect of NT and EMDR following STAIR on the categorical outcome of a current diagnosis of PTSD as rated by a clinician on the basis of the CAPS interview. To prevent data from being biased due to measurement attrition, missing values were handled using a multiple imputation procedure with regression switching and predictive mean matching (MICE-PMM; Marshall et al., 2010). To include all participants in the analysis, missing post-treatment, 3-month and 12-month follow-up data were estimated 5 times to generate 5 data sets with imputed data. These 5 imputed data sets were then averaged to provide pooled frequency counts, hazard ratios, Wald χ^2 statistics, and *p* values.

3. Results

3.1. Pre-intervention group differences

Table 2 shows the demographic and pre-treatment characteristics of participants per condition. All

Table 1. Treatment adherence pairwise comparisons matrix.

Treatment Scale	STAIR		NT		EMDR		STAIR vs NT (M)	STAIR vs EMDR (M)	NT vs EMDR (M)	STAIR vs NT (Cohen's <i>d</i>)	STAIR vs EMDR (Cohen's <i>d</i>)	NT vs EMDR (Cohen's <i>d</i>)
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>						
STAIR integrity scale	0.77	0.15	0.11	0.06	0.05	0.05	0.67***	0.72***	0.06	5.87	13.04	1.09
NT integrity scale	0.14	0.06	0.91	0.13	0.1	0.09	-0.77***	0.04	0.81***	7.61	0.36	7.24
EMDR integrity scale	0	0	0.14	0.05	0.76	0.13	-0.14	-0.76***	-0.62***	3.96	7.72	6.30

Note: Cohen's *d* expressed as positive values; hypothesized effects printed in **bold**.
****p* < .001.

participants had experienced repeated or chronic interpersonal childhood trauma, e.g. sexual and/or physical abuse, before the age of 17. At baseline, there were no significant differences between the groups in any of the demographic or clinical characteristics (all *p*'s > .10). The scores on the Dissociative Experiences Scale (DES) differed between the groups at baseline, however the difference just missed significance $F(1, 60) = 3.81, p = .06$. Nevertheless, we entered this variable as an additional predictor in the main analyses.

3.2. Attrition

Dropout rate per treatment arm was defined as the percentage of participants not completing the whole

course of treatment after randomization. There was no difference in treatment dropout between STAIR/NT (8 participants [23.5%]) and STAIR/EMDR (11 participants [32.4%]) ($p = .42$). However, there was a statistically significant difference in treatment dropout between STAIR (15 participants [22.1%]) and EMDR or NT (4 participants [5.9%]) ($\chi^2 = 48.56, p < .001$). Most participants dropping out of treatment did so within the first 5 treatment sessions. There were three early completers (less than in total 16 sessions) in STAIR/NT (11.5%) and 0 in STAIR/EMDR (0%); this difference was not statistically significant ($\chi^2 = 2.83, p = .09$). The mean number of treatment sessions attended by treatment completers (including the early completers) was 18.5 in STAIR/NT and 18.3 in STAIR/EMDR.

Table 2. Demographic and clinical characteristics of EMDR and NT groups, tested for group differences.

	STAIR-NT <i>M</i> (<i>SD</i>) <i>N</i> (%)	STAIR-EMDR <i>M</i> (<i>SD</i>) <i>N</i> (%)	Test statistic	<i>p</i>
Age	35.2 (9.4)	36.6 (10.3)	$t(66) = 0.58$.57
Gender			-	1.00 ^a
Male	30 (88.2)	4 (11.8)		
Female	30 (88.2)	4 (11.8)		
Ethnicity			-	.56 ^a
Dutch	20 (58.8)	26 (76.5)		
Surinamese	2 (5.9)	1 (2.9)		
European	3 (8.8)	3 (8.8)		
African	3 (8.8)	1 (2.9)		
other	6 (17.6)	3 (8.8)		
Education			$\chi^2(1) = 1.87$.19 ^b
Low	8 (24.9)	11 (32.4)		
Middle	19 (59.4)	20 (58.8)		
High	5 (15.7)	3 (8.8)		
Marital status			-	.73 ^a
Married or living together	14 (41.2)	17 (50.0)		
Widow(er)	1 (2.9)	2 (5.9)		
Divorced	8 (23.5)	5 (14.7)		
Never married	11 (32.4)	10 (29.4)		
Age at first trauma			$\chi^2(1) = 0.43$.58 ^b
≤ 6	20 (58.8)	21 (63.6)		
7–12	10 (29.4)	10 (30.3)		
13–17	4 (11.8)	2 (6.1)		
Borderline Personality Disorder			$\chi^2(1) = 0.07$.79 ^c
	<i>Mdn</i> (<i>Range</i>)	<i>Mdn</i> (<i>Range</i>)		
Number of DSM Axis I disorders	1 (0–2)	1 (0–4)	$U = 498.5$.29

Notes: ^aComputed using Fisher's Exact Test; ^bComputed using Mantel-Haenszel linear by linear χ^2 test; ^cComputed using Pearson chi-square test; DSM = Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision.

3.3. Effects on primary outcome measures

Table 3 shows estimated means and standard deviations for STAIR/EMDR and STAIR/NT groups at each assessment and for all outcomes, including *F*-tests for the effects of time, treatment condition, the effects of time × treatment condition, and the between-group effect sizes. The main effect of linear time for the CAPS indicates that both STAIR/NT and STAIR/EMDR led to a significant reduction of PTSD symptoms. Large pre- to post-treatment effect sizes were found ($d = .89$ – 1.29) that remained stable until 3-month follow-up ($d = 1.50$ – 1.43) and until 12-month follow-up ($d = 1.72$ – 1.94). The Treatment condition by Linear time and Treatment condition by Quadratic time interactions were not significant, indicating no differences between NT and EMDR in the rate of change of clinician-rated PTSD symptoms over time. For the PDS, the main effect of slope 1 (pre- to mid-treatment) indicates that STAIR led to a significant reduction of PTSD symptoms. In both treatment conditions, self-reported PTSD symptoms moderately decreased from pre- to mid-treatment (i.e. after STAIR; $d = .48$ – $.64$). The main effect of slope 2 (mid-treatment to 3-month follow-up) indicates that both NT and EMDR led to reductions of PTSD symptoms. Large pre- to post-treatment effect sizes were found (i.e.

Table 3. Corrected mixed-regression based estimated means, standard errors (in parentheses) and within-group effect sizes (Cohen's *d*; relative to pre-treatment).

Measure	Condition	Pre-Treatment		Mid-Treatment		Post-treatment		3 m FU		12 m FU	
		M (SE)	M (SE)	M (SE)	M (SE)	Within-group <i>d</i>	Within-group <i>d</i>	M (SE)	M (SE)	Within-group <i>d</i>	Within-group <i>d</i>
CAPS	NT	68.99 (3.62)		47.37 (4.97)		0.81***	1.50***	37.15 (4.97)	31.91 (5.26)	1.72***	1.72***
	EMDR	64.47 (3.62)		33.69 (5.22)		1.29***	1.43***	29.11 (5.22)	21.57 (6.29)	1.94***	1.94***
PDS	NT	32.40 (1.85)	26.75 (1.86)	17.89 (2.05)	0.64*	1.68***	1.81***	14.28 (2.09)	15.19 (2.27)	1.71***	1.71***
	EMDR	29.30 (1.86)	26.13 (2.01)	10.43 (2.12)	0.48*	2.15***	2.32***	11.97 (2.20)	10.29 (2.55)	1.97***	1.97***
BDI	NT	30.56 (2.19)	25.72 (2.33)	20.02 (2.58)	0.32*	0.80***	1.19***	12.88 (2.63)	14.26 (2.85)	1.47***	1.47***
	EMDR	31.05 (2.20)	28.30 (2.53)	12.24 (2.71)	0.31*	1.61***	1.68***	14.25 (2.82)	10.57 (3.31)	1.36***	1.36***
BAI	NT	48.09 (2.43)	45.07 (2.41)	38.46 (2.61)	0.23 ^{ns}	0.64***	0.94***	32.50 (2.66)	34.34 (2.89)	0.80***	0.80***
	EMDR	45.73 (2.45)	44.11 (2.58)	33.98 (2.74)	0.17 ^{ns}	1.28***	0.69***	37.29 (2.86)	31.27 (3.35)	1.07***	1.07***
DERS	NT	105.10 (4.70)	102.36 (4.52)	85.06 (4.75)	0.09 ^{ns}	0.66***	0.73***	80.36 (4.88)	79.54 (5.42)	0.73***	0.73***
	EMDR	109.51 (4.90)	105.25 (5.07)	77.52 (5.11)	0.20 ^{ns}	1.16***	1.16***	79.18 (5.50)	74.34 (6.19)	1.07***	1.07***
IIP	NT	57.57 (3.61)	54.30 (3.49)	43.67 (3.75)	0.17 ^{ns}	0.70***	0.81***	34.09 (3.90)	39.03 (4.34)	0.66***	0.66***
	EMDR	55.13 (3.79)	49.77 (3.91)	39.03 (4.03)	0.19 ^{ns}	0.59***	0.78***	35.69 (4.39)	32.20 (4.94)	0.84***	0.84***
DES	NT	70.00 (6.78)	64.79 (6.34)	46.61 (6.48)	0.18 ^{ns}	0.89***	0.88***	43.15 (6.54)	41.91 (7.11)	0.70***	0.70***
	EMDR	48.22 (7.16)	49.80 (6.86)	23.33 (6.91)	0.07 ^{ns}	0.66***	0.58***	24.90 (7.27)	19.67 (8.02)	0.77***	0.77***

Notes: CAPS = Clinical-administered PTSD scale; PDS = Posttraumatic Diagnostic Scale; BDI = Beck Depression Inventory; BAI = Beck Anxiety Inventory; DES = Dissociative Experiences Scale; IIP = Inventory of Interpersonal Problems; DERS = Difficulties in Emotion Regulation Scale; 3 m FU = 3-month follow-up; 12 m FU = 12-month follow-up. * $p < .05$; ** $p < .01$; *** $p < .001$.

after NT or EMDR; $d = 1.68$ – 2.15) that remained stable until 3-month follow-up ($d = 1.81$ – 2.32) and 12-month follow-up ($d = 1.71$ – 1.97). The Treatment by Slope 2 interaction and Treatment by Slope 3 interaction were not significant, indicating no differences between NT and EMDR in the rate of change from mid-treatment to 3-month follow-up and from 3-month follow-up to 12-month follow-up.

3.4. Effects on secondary outcome measures

The significant main effect of slope 1 for the BDI indicates significant reductions of depressive symptoms during STAIR (Table 4). Pre- to mid-treatment effect sizes were moderate (i.e. $d = .32$ – $.31$). The significant main effect of slope 2 indicates significant reductions of depressive symptoms during NT and EMDR. Pre- to post-treatment effect sizes were large (i.e. after NT or EMDR; $d = .80$ – 1.61), and were maintained over time (i.e. after NT or EMDR; 3-month follow-up $d = 1.19$ – 1.68 ; 12-month follow-up $d = 1.47$ – 1.36). Symptoms of anxiety, emotion dysregulation, interpersonal problems and dissociation were not decreased at mid-treatment (after STAIR), as indicated by non-significant main effects of slope 1 for the BAI, DERS, IIP, and DES. All of the main effects of slope 2 were significant, however, indicating significant mid-treatment to 3-month follow-up reductions. Pre- to post-treatment effect sizes were moderate to large (i.e. after NT or EMDR $d = .64$ – 1.16) and were maintained over time (i.e. after NT or EMDR; 3-month follow-up $d = .58$ – 1.16 ; 12-month follow-up $d = .66$ – 1.07). For all secondary outcome measures, the Treatment by Slope 2 interactions and Treatment by Slope 3 interactions were not significant, indicating no differences between NT and EMDR in the rate of change from mid-treatment to 3-month follow-up and from 3-month follow-up to 12-month follow-up.

3.5. Clinical status

Table 5 presents the proportions of participants who had no reliable change, reliable change, and reliable and clinically significant change, respectively, based on the CAPS. There were no significant differences between STAIR/NT and STAIR/EMDR.

A survival analysis was carried out to compare the loss of a PTSD diagnosis rating on the CAPS across conditions. A non-significant result was found, Wald $\chi^2(1) = 0.85$, $p = .47$. The risk ratio for NT versus EMDR was 0.80, 95% CI [0.44–1.46]. Participants in the NT and EMDR conditions did not significantly differ in loss of PTSD diagnosis and full remission. Pooling the data from the 5 imputed data sets led to an estimation of 26.6 participants (78.2%) reporting no PTSD at 12-month follow-up in the NT condition

Table 4. Multilevel regression analyses for NT and EMDR on all outcome measures, mid-treatment to 3-month follow-up between group effect sizes (Cohen's *d*), and 3-month to 12-month follow-up between-group effect sizes.

Measure		<i>F</i>	<i>df</i>	<i>b</i>	<i>SE</i>	<i>p</i>	<i>d</i> ¹
CAPS	Treatment condition	0.96	106.06	4.98	5.08	.33	
	Linear time	43.36	110.91	-28.30	4.30	<.001	
	Quadratic time	12.63	97.70	5.17	1.46	<.001	
	Condition × linear time	0.81	110.91	7.74	8.60	.37	-0.05
	Condition × quadratic time	0.52	97.70	-2.10	2.91	.47	
PDS	Treatment condition	0.02	59.75	0.23	1.49	.88	
	Slope 1	13.38	68.86	-4.66	1.28	<.001	
	Slope 2	72.42	51.59	-12.70	1.49	<.001	
	Slope 3	0.26	29.47	-0.89	1.75	.61	
	Condition × slope 2	2.22	46.43	4.29	2.88	.14	-0.17
BDI	Condition × slope 3	0.00	29.47	-0.03	3.51	.99	-0.24
	Treatment condition	2.26	61.47	-3.68	2.44	.14	
	Slope 1	5.45	71.96	-4.25	1.82	.02	
	Slope 2	43.54	61.46	-11.80	1.79	<.001	
	Slope 3	1.35	31.97	-2.21	1.91	.26	
BAI	Condition × slope 2	3.29	51.82	5.93	3.27	.08	-0.10
	Condition × slope 3	0.01	31.98	-0.13	3.81	.97	-0.40
	Treatment condition	0.00	65.65	-0.14	2.71	.96	
	Slope 1	2.06	70.93	-2.45	1.71	.16	
	Slope 2	22.91	61.95	-8.93	1.86	<.001	
DERS	Slope 3	1.32	30.86	-2.44	2.13	.26	
	Condition × slope 2	0.15	50.18	-1.27	3.33	.70	0.47
	Condition × slope 3	0.24	30.86	2.09	4.25	.63	-0.58
	Treatment condition	4.11	184.82	-9.86	4.86	.05	
	Slope 1	1.36	168.87	-4.10	3.52	.25	
IIP	Slope 2	40.38	60.26	-22.43	3.53	<.001	
	Slope 3	0.89	80.91	-3.14	3.33	.35	
	Condition × slope 2	2.16	175.25	9.17	6.23	.14	-0.17
	Condition × slope 3	0.05	60.24	1.45	6.66	.83	-0.20
	Treatment condition	0.24	62.59	1.86	3.81	.63	
DES	Slope 1	3.40	74.90	-4.52	2.45	.07	
	Slope 2	20.99	58.81	-13.17	2.87	<.001	
	Slope 3	0.42	27.69	-2.11	3.27	.52	
	Condition × slope 2	0.03	50.12	-0.97	5.27	.86	0.40
	Condition × slope 3	0.62	27.70	5.15	6.54	.44	-0.40
DES	Treatment condition	0.11	130.91	-1.48	4.48	.74	
	Slope 1	0.69	190.98	-2.67	3.21	.41	
	Slope 2	54.29	201.48	-23.18	3.15	<.001	
	Slope 3	0.30	173.12	-2.17	3.95	.58	
	Condition × slope 2	0.49	197.92	4.27	6.08	.48	-0.09
	Condition × slope 3	0.01	154.22	0.62	7.82	.94	-0.13

Notes: CAPS = Clinical-administered PTSD scale; PDS = Posttraumatic Diagnostic Scale; BDI = Beck Depression Inventory; BAI = Beck Anxiety Inventory; DES = Dissociative Experiences Scale; IIP = Inventory of Interpersonal Problems; DERS = Difficulties in Emotion Regulation Scale. Condition = NT versus EMDR, Slope 1 represents the time-varying covariate modelling pre- to mid-treatment change, Slope 2 represents the time-varying covariate modelling mid-treatment to 3-month follow-up change, Slope 3 represents the time-varying covariate modelling 3-month follow-up to 12-month follow-up change.
¹Cohen's *d* pre-treatment to 12-month follow-up effect size (CAPS), Cohen's *d* mid-treatment to 3-month follow-up (Condition × slope 2) and 3-month to 12-month follow-up (Condition × slope 3) effect size (all other measures).

and 26.2 participants (77.0%) reporting no PTSD at 12-month follow-up in the EMDR condition.

4. Discussion

The present study compared two phase-based treatments for PTSD following childhood physical and/or sexual abuse in a pragmatic randomized controlled trial. First, earlier findings on the effectiveness of STAIR/NT were replicated in a routine clinical setting. Specifically, STAIR/NT led to a significant decrease in both interviewer-rated as well as self-reported PTSD symptoms from pre- to post-treatment, showing large effect sizes, and effects remained stable or increased during the 3-month and 12-month follow-up interval. Importantly, effect sizes were comparable to those observed by Cloitre et al. (2010) and compared favourably to average effect sizes of treatments

for PTSD following childhood abuse (Coventry et al., 2020; Ehring et al., 2014; Karatzias et al., 2019; Niemeyer et al., 2022). In both conditions, reliable and clinically significant change was analysed. We found that at 3-month and 12-month follow-up, more than 70% of participants did not meet PTSD criteria anymore. Change rates in diagnostic status were comparable to those reported in a meta-analysis of treatment for PTSD in general (Cusack et al., 2016; Karatzias et al., 2019; Niemeyer et al., 2022).

Second, we investigated the efficacy of STAIR followed by EMDR. STAIR/ EMDR led to significant reductions in PTSD symptom severity that did not significantly differ from those identified in the STAIR/NT condition. This is in line with findings on the treatment of PTSD following adult-onset trauma, showing no systematic differences between TF-CBT and EMDR (Bisson et al., 2013; Chen et al., 2015;

Table 5. Percentages of participants achieving no reliable change, reliable change, and reliable and clinically significant change on the CAPS at post-treatment and 3-month follow-up.

	Post-treatment			3-month follow-up			12-month follow-up		
	STAIR/ NT <i>n</i> = 21	STAIR/ EMDR <i>n</i> = 23	Difference test	STAIR/ NT <i>n</i> = 21	STAIR/ EMDR <i>n</i> = 20	Difference test	STAIR/ NT <i>n</i> = 19	STAIR/ EMDR <i>n</i> = 13	Difference test
CAPS (continuous)									
No reliable change	43.5%	19.0%	$p = .11$; FET ¹	28.6%	10.5%	$p = .24$; FET	31.6%	7.7%	$p = .20$; FET
Reliable change, but not clinically significant	8.7%	9.5%	$p = .92$; FET	4.8%	5.3%	$p = .93$; FET	0.0%	0.0%	n.a.
Reliable and clinically significant change	47.8%	71.4%	$\chi^2(1) = 2.52$, $p = .14$	66.7%	84.2%	$p = .24$; FET	68.4%	92.3%	$p = .20$; FET

Notes: STAIR/NT = STAIR + Narrative Therapy; STAIR/EMDR = STAIR + EMDR; CAPS = Clinician-administered PTSD scale. ¹Fisher's exact tests (FET) were used for comparisons across conditions when cells contained frequencies <5.

Cusack et al., 2016; Hoppen et al., 2023; Kip et al., 2023; Watts et al., 2013). In sum, our results suggest that PTSD following childhood physical and/or sexual abuse can effectively be treated by brief phase-based treatments (mean number of sessions: 18), using STAIR followed by either NT (as a variant of TF-CBT) or EMDR.

As childhood abuse survivors typically show high levels of symptom complexity in addition to PTSD (Cloitre et al., 2013; Karatzias et al., 2019), it is relevant to also investigate the effect of treatment on secondary symptom measures. Results showed that both treatments led to large reductions in symptoms of depression, anxiety, and dissociation, as well as emotion dysregulation, and interpersonal problems; effects on these secondary outcomes were also retained or increased further at 3-month and 12-month follow-up.

Of note, the largest reduction in primary and secondary outcomes occurred during the trauma-focused phase, which is in line with earlier findings (De Jongh et al., 2016; Opvel et al., 2021; Raabe et al., 2022; Van Minnen et al., 2012; Van Vliet et al., 2021). From pre- to mid-treatment, i.e. after STAIR, PTSD and depressive symptoms only moderately decreased, and symptoms of anxiety, dissociation, emotion dysregulation and interpersonal problems did not change significantly during this phase. This is remarkable as the STAIR training phase comprised interventions specifically tailored to improve emotion regulation and reduce interpersonal problems. At first sight, the findings might suggest that a skills training phase prior to a trauma-focused treatment is not necessary (De Jongh et al., 2016; Van Minnen et al., 2012). However, this conclusion may be premature for two reasons. First, our results regarding the immediate effects of STAIR differ from earlier research that has found large reductions in primary and secondary outcome measures for STAIR alone (Cloitre et al., 2010; MacIntosh, Cloitre, Kortis, Peck & Weiss, 2018). Given the inconsistent results in earlier studies, it is advisable to pursue studies that delve into the efficacy of phase-based treatments, considering recent trial results (e.g. Opvel et al., 2021; Raabe et al., 2022; but Jackson et al., 2019; Sullivan et al., 2023). By

doing so, we can gain a more comprehensive understanding of the benefits these treatments offer. Additionally, it therefore appears important to investigate moderators of the efficacy of STAIR, including possible cultural differences, patient characteristics, or dose of therapist training. Second, as this study did not include a condition without an initial STAIR phase, we cannot evaluate whether EMDR or NT alone would have produced the same results on all outcome measures. Although the immediate effects of STAIR on symptoms were in the low to moderate range, it may nevertheless have increased the efficacy of the trauma-focused treatments in Phase 2. Most studies to date comparing TF-CBT along with STAIR/TF-CBT, and the same for EMDR, have shown that phase-based treatments and immediate trauma-focused therapy do not differ. If both are options with little evidence for a difference, an important argument to take into account is what the most cost-effective option is and what limited resources for specialist treatment should focus on.

The total treatment dropout rate in this study was 28%. This is in line with earlier studies in this population. Ehring et al. (2014) found that the average dropout rate across treatment studies of PTSD in adult survivors of childhood abuse was 22.29%, 95% CI = [17.35%; 28.16%]. Some authors have argued that trauma-focused treatments may lead to symptom exacerbation or higher dropout rates. In our study, the highest dropout was observed in the skills training phase (15 participants), primarily during the first 5 sessions. In the trauma-focused phase only 4 participants declined treatment (EMDR: $n = 1$; NT: $n = 3$) which is comparable to the dropout in other studies during the trauma-focused phase (Opvel et al., 2021).

There is preliminary evidence suggesting that in more intensified treatment dropout rates tend to be lower (Boterhoven de Haan et al., 2020; Van Woudenberg et al., 2018). Other studies of phase-based treatment show lower percentage of dropout the first sessions of STAIR (Opvel et al., 2021; Raabe et al., 2022). In our study we did not use a treatment feasibility interview like Raabe and Opvel did. Possibly this influenced the results. A treatment feasibility

interview should be standard care before starting treatment in general.

An important strength of the current study is the pragmatic nature of the RCT, which ensures generalizability of study results to clinical practice. Standard protocols were used in outpatient services for patients with high symptom complexity, limited exclusion criteria, regular therapists with a realistic case load, as well as a realistic amount of training and supervision, leading to high external validity.

On the other hand, the results need to be interpreted in the light of some limitations.

First, in our study, a quarter of the patients still met diagnostic criteria for PTSD. This is comparable with other RCT's on treatment of PTSD in adult child abuse survivors (e.g. Boterhoven de Haan et al., 2020; Oprel et al., 2021; Van Vliet et al., 2021). It remains important to investigate whether specific symptoms, and maybe also other relevant patient characteristics, might moderate treatment outcome.

Secondly, because the study took place between 2011 and 2016, patients were included based on DSM-IV-TR PTSD criteria, not on DSM-5. Applying DSM-5 criteria may have resulted in a slightly different sample (O'Donnell et al., 2014; Stein et al., 2014). However, we do not expect this difference to be clinically relevant.

Thirdly, all participants had experienced childhood sexual and/or physical abuse. However, there was a considerable variability in severity and duration of these events as well as age of traumatization. Due to power limitations, we were unable to test whether treatment effects are moderated by any of these factors. Fourth, patients with a history of serious suicide attempts during the last 6 months were excluded, as in most other studies. Future studies should focus on how this subgroup can be treated. Fifth, the response rate at 12-month follow-up was low (50%). The assessments were face-to-face and a significant portion of participants could not be reached or motivated for an assessment appointment after a year. Finally, the sample size was relatively small. While it's true that our study featured a modest sample, it's important to note that this study can serve as a pioneering step towards exploring combined treatment approaches.

Despite these limitations, our findings show that brief phase-based treatments consisting of 8 skills training sessions of 60 min using the STAIR manual followed by a maximum of 12 sessions of either NT or EMDR of 90 min are effective in reducing both symptoms of PTSD as well as secondary outcome measures in adult survivors of childhood abuse. Interestingly, the emotion regulation symptoms did strongly decrease in the trauma-focused phase and not during the skills training. Importantly, earlier results from highly specialized academic treatment centres could be replicated in routine clinical settings.

Notes

1. Note that this component was originally termed 'Modified Prolonged Exposure (MPE)', but the original authors now prefer using the term 'Narrative Therapy (NT)'.
2. Note that diagnoses were based on DSM-IV-TR because the study was initiated prior to publication of DSM-5.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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Data availability statement

The data that support the findings of this study are available on request from the corresponding author, [I.W.]. The data are not publicly available due to [restrictions e.g. their containing information that could compromise the privacy of participants].

ORCID

- I. Wigard  <http://orcid.org/0009-0001-5179-0722>
 K. Meyerbröker  <http://orcid.org/0000-0002-3122-6331>
 M. Topper  <http://orcid.org/0000-0003-2063-4775>
 A. Arntz  <http://orcid.org/0000-0002-7992-2272>
 P. Emmelkamp  <http://orcid.org/0000-0001-6066-5512>

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