

Yoga for Adolescent (c)PTSD: Pilot Study Protocol

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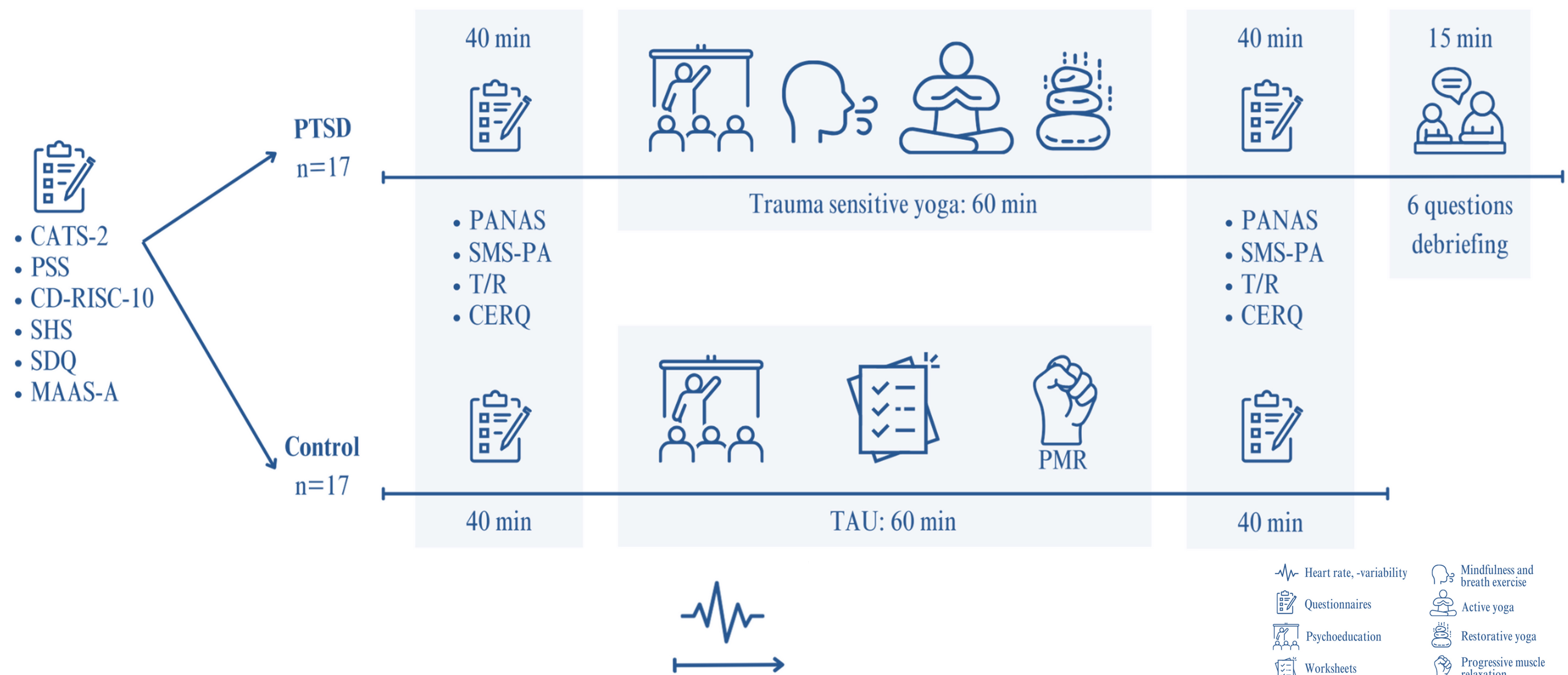


Figure 1. Study Design. Questionnaires used at T1: Child and Adolescent Trauma, Screening (CATS-2), Perceived Stress Scale (PSS), Connor-Davidson Resilience Scale (CD-RISC-10), Subjective Happiness Scale (SHS), Strength and Difficulties Questionnaire (SDQ), Mindful Attention Awareness Scale for Adolescents (MAAS-A). Questionnaires used at T2 & T3: Positive and Negative Affect Schedule (PANAS), State Mindfulness Scale for Physical Activity (SMS-PA), Tension/Relaxation Scale (T/R), Cognitive Emotion Regulation Questionnaire (CERQ)

Theoretical Background

Current treatments for Post-traumatic Stress Disorder PTSD only benefit 30%-60% of patients (Bradley et al., 2005). Thus, alternative treatments must be explored. PTSD is associated with **autonomic dysregulation** (Schneider & Schwerdtfeger, 2020). **Yoga can improve autonomic function** and stands among alternative PTSD treatments (Vamcomfort et al., 2021). To date, there are **no trials studying the effects of Yoga on adolescents with PTSD in a clinical setting** yet. However, clinical trials with adults found **reduced levels of PTSD symptoms** and **improved autonomic function**, compared to control groups (Cramer et al., 2018; Sciarrino et al., 2017). Research with adults is limited by a lack of documentation of Yoga interventions, heterogeneous diagnostic instruments and control conditions, and high dropout rates (Moonaz et al., 2021).

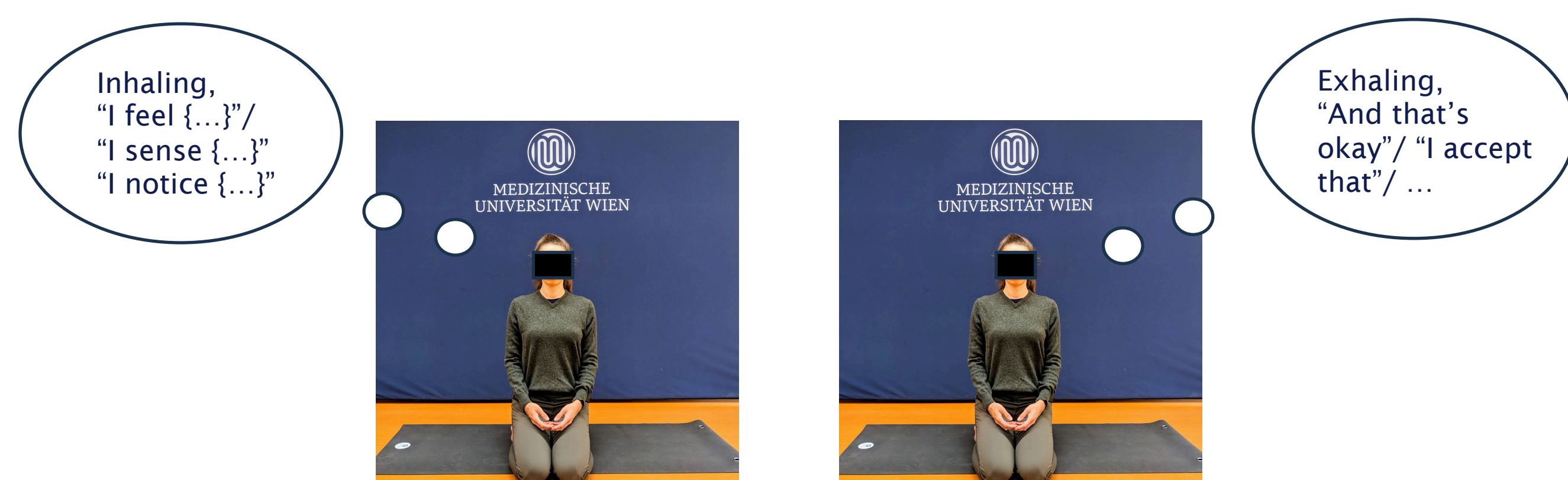


Figure 2. Yoga Intervention, Pt. 1: Pranayama. Breathing deeply, participant silently names one current sensation or emotion on each inhale and quietly validates it during every exhale. Statements are modified according to individual's preferences.



Figure 3. Yoga Intervention, Pt. 2: Active Postures. Options are offered for each pose. Emphasis on breath and validation of sensations and emotions (optional employment of breath exercise above in postures).

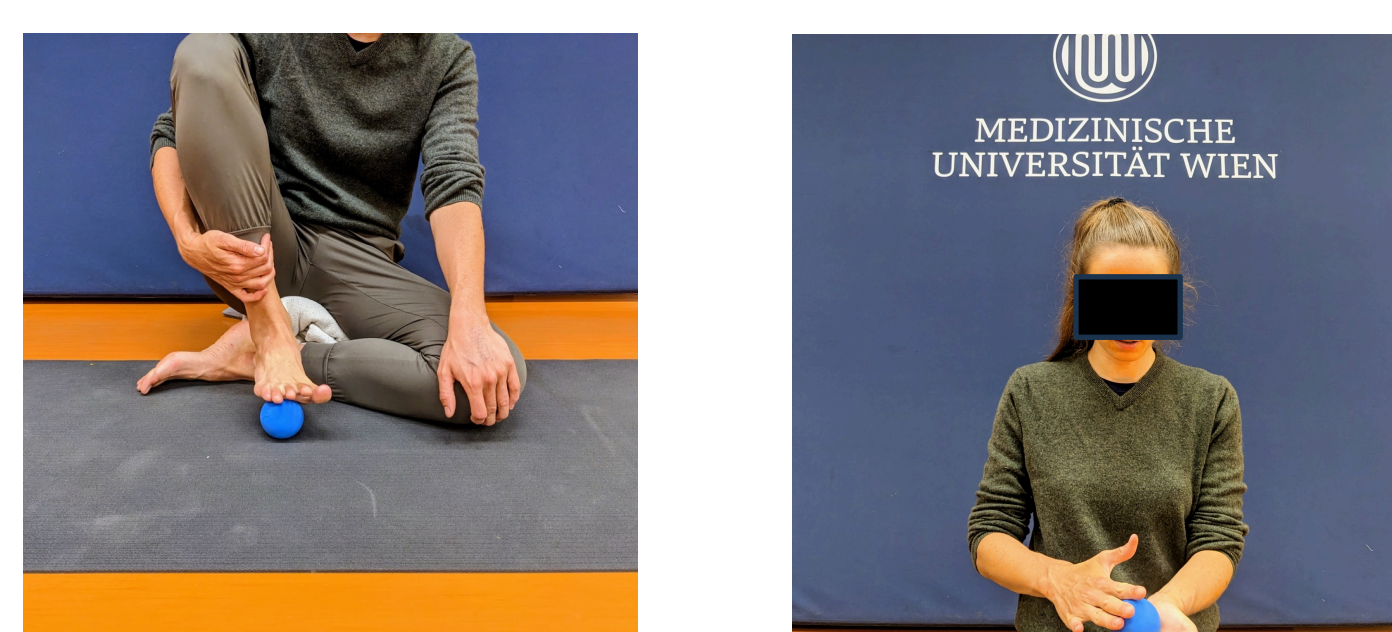


Figure 4. Yoga Intervention, Pt. 3: Self-massage. Rolling lacrosse ball across hands, forearms, soles of feet. Emphasis on individual management of pressure and tempo.



Figure 4. Yoga Intervention, Pt. 4: Restorative Positions. Props support spine in gentle extension and peripheral joints in minor flexion. Optional use of weights and eye covering. Individual pose duration (5-15 min).

Objective

This study will address the gap in evidence concerning the therapeutic effectiveness of **Yoga for adolescents with PTSD**. In response to limitations of Yoga for adult PTSD research, will use **standardized diagnostic instruments** and establish a **consistent active control condition**. Additionally, efforts will be made to reduce dropout rates through **improved participant engagement**.

Study Design

We will investigate the impact of a one-hour Yoga intervention on **emotion regulation, affect, and psychophysiology** of adolescents with PTSD. The control group will receive relaxation training (treatment as usual). In a single session intervention, our randomized controlled trial will assess affect and emotion regulation pre and post intervention and record **heart rate (HR)**, **heart rate variability (HRV)** throughout. Additionally, psychological questionnaires and **qualitative interviews** will be conducted.

Participants

The study will include **34 adolescents** (ages 14-;00-17;11) **diagnosed with PTSD or complex PTSD** according to DSM-5 criteria. Participants will be recruited from the Clinic for Child and Adolescent Psychiatry of Medical University of Vienna, and randomly assigned to either the Yoga intervention or the active control group (**n=17 per group**).

Procedure

Assessments will occur at baseline (t0), pre-test (t1), and post-test (t2). Baseline includes questionnaires and clinical impressions. Immediately preceding the intervention, pre-test questionnaires will be administered. During the intervention, HR/HRV measurements will be recorded. Directly after the intervention, post-test (same questionnaires as pretest) will be completed, followed by a 15-minute qualitative interview.

The experimental group will undergo **Yoga (breath exercises, active Yoga postures, self-massage and restorative Yoga)**. The control group will receive **psychoeducation and) relaxation training (therapeutic worksheet, Progressive Muscle Relaxation**

Contact & Bibliography

Please scan the QR code to access our contact details and bibliography.

