

# The Acute Stress Syndrome Stabilization Remote Individual (ASSYST-RI) for TeleMental Health Counseling After Adverse Experiences



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## Abstract

The aim objective of this field trial was to evaluate the feasibility and effectiveness of the Acute Stress Syndrome Stabilization Remote Individual (ASSYST-RI) procedure in decreasing the levels of subjective perceived disturbance produced by the psychological distress or physiological reactivity of recent adverse experiences (e.g., kidnappings, COVID-19-related distress, interpersonal violence). A total of 48 participants (39 females and 9 males) ranging in ages from 18 to 67 years old (M=37.1 years) received one-single ASSYST-RI session of 50 minutes average duration. Participation was voluntary with the participants' verbal informed consent in accordance with the Mental Capacity Act 2005. The telemental health counseling was in compliance with the American Psychological Association (APA) Guidelines for the Practice of Telepsychology. A pre-post design was applied comparing the subjective units of disturbance (SUD) means using a within t-test analysis. Results showed significant differences with a large effect size. Pre-test (M = 8.27, SD = 1.69) and post-test (M = 1.45, SD = 1.66), Cohen's d = 3.32. This field trial provides preliminary evidence on the ASSYST-RI feasibility and effectiveness in decreasing the levels of subjective perceived disturbance produced by the psychological distress or physiological reactivity of recent adverse experiences.

**Keywords:** ASSYST-Remote Individual; online early intervention; TeleMental Health Counseling; Psychological distress; Physiological reactivity; COVID-19.

## Introduction

The number of traumatized individuals in the world is staggering and the need for treatment to help large groups of people get back to baseline functioning as rapidly as possible is essential [1]. Individual reactions, needs and coping strategies to traumatic events and long-term impacts can vary greatly among survivors. Common initial reactions directly after a traumatic event can include emotional symptoms such as feelings of sadness, anxiety, agitation, and guilt, dysregulation and numbing; somatic symptoms such as hyperarousal and difficulties with sleep; cognitive impairments such as cognitive dissonance and intrusive thoughts; memory related symptoms such as flashbacks and triggings; and behavioral reactions such as avoidance [2].

The presentation of some of these symptoms for a short amount of time following a traumatic event can be normal and sub clinical; however, some individuals may develop clinically

significant symptoms that can cause more serious distress. Concerning responses include continuous distress without periods of relative calm, severe dissociation symptoms, and intense intrusive recollections despite safety. Responses to trauma can also be delayed and include persistent fatigue, sleep disorders, nightmares, fear of recurrence, anxiety, flashbacks, depression, and avoidance. If reactions to trauma do not resolve, some individuals may develop more severe symptoms of Acute Stress Disorder (ASD), Posttraumatic Stress Disorder (PTSD), Depression, and Anxiety [2].

ASD and PTSD Intrusion Symptoms associated with the traumatic event(s), are: 1. Recurrent, involuntary, and intrusive distressing memories of the traumatic event(s). 2. Recurrent distressing dreams in which the content and/or affect of the dream are related to the traumatic event(s). 3. Dissociative

reactions (e.g., flashbacks) in which the individual feels or acts as if the traumatic event(s) were recurring. 4. Intense or prolonged psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event(s). 5. Marked physiological reactions to internal or external cues that symbolize or resemble an aspect of the traumatic event(s). These intrusive distressing memories often include sensory, emotional, or physiological components. Some individuals experience intense psychological distress or physiological reactivity when they are exposed to triggering events that resemble or symbolize an aspect of the traumatic event [3]. This can cause severe issues over time in interpersonal relationships, work dynamics, and daily life impairments. With the cumulative nature of traumatic affects, leaving the symptoms of trauma unresolved over time can add unnecessary and avoidable strain on one's life.

### Importance of Early Mental Health Interventions

It is crucial to identify and provide brief interventions swiftly, that are both efficient and affordable in all contexts, particularly as a first intervention shortly after the trauma event [4]. This is especially relevant during the COVID-19 global pandemic where remote therapy has significantly expanded and been crucial for supporting people all across the world. This has brought about a new era of mental health therapy that does not only exist in-person. Not only is there limited evidence of the effectiveness of early, online mental health interventions, but the research on the effectiveness of in-person, early, short-term, stabilization interventions is also limited [5]. This paper will review of the existing research on brief, early interventions, including Psychological Debriefing and Psychological First Aid (PFA). Research on Psychological Debriefing has long suggested it is not an effective intervention. On the other hand, Shah et al., [6] suggest that mental health interventions such as PFA, are critical in the response to those exhibiting signs of mental disorders, particularly stress-related reactions during and after traumatic events such as a pandemic [6]. Though Psychological First Aid is a recommended early intervention, empirical evidence on its effectiveness remains unclear [7,8]. Furthermore, PFA appears to be a good first step in providing support for those who have recently experienced trauma, but it is noted to not be a treatment for mental health issues [7]. The researcher suggests that more time is spent reviewing the populations and situations in which PFA is effective and useful and where it is lacking. This will help the field of mental health understand where and when it is useful to use PFA versus other interventions. Intervention recommendations ideally should move beyond their basis in consensus and become more rooted in evidence [8]. Furthermore, Brand et al. [9] suggest the incorporation of identified individual support needs in effective early interventions. They suggest the implementation of interventions that focus on "promoting activity, supporting social relationships, stress and arousal management, and cognitive restructuring" (p. 376) as well as interventions that target rumination, worry, and reexperiencing symptoms [9]. This

researcher proposes evaluation of brief interventions that are efficient and accessible in all contexts (including low resourced settings) that show effectiveness of reducing symptoms after a recent critical incident.

### Current Developments in Telehealth Counseling

Remote mental health interventions appear to be particularly critical in light of the COVID-19 pandemic. Because social distancing has made in person care nearly impossible, many mental health interventions are being made remote. Remote interventions could improve the mental health response to the COVID-19 crisis by improving the quality and effectiveness of emergency responses [10]. Furthermore, remote interventions allow people to access critical services without risk of infection [11,12]. Though there is a push for more online mental health interventions, there is little research on what remote responses might be most useful. Both advantages and challenges of online mental healthcare are discussed below.

#### Advantages

Multiple studies note the advantages of utilizing online adaptations for mental health counseling [13-17]. For example, this form of care may be particularly useful for low resource and hard to reach populations, such as those in underdeveloped communities that do not have ready access to quality mental health services [13,15,18]. Online mental health care can provide services in difficult areas and emergency situations due to its ability to provide flexible and rapid care [14]. Additionally, there is evidence that telemental health care may improve patient satisfaction, reduce costs of care, improve access to care, offer more flexibility, and still allow for interactive sessions between clients and clinicians [15,16,19]. There is also evidence that telemental health care is effective in addressing mental health concerns [16,18,19]. In their Meta-Analysis, Sander et al. provide evidence for the usefulness of internet-based interventions in the prevention of mental disorders such as depression and anxiety and note the likely usefulness for other disorders [16]. Studies further note that the use of interventions such as video conferencing seemed to be comparable to in-person, face to face treatments for issues such as anxiety, depression, and PTSD [17-20]. Future research comparing the efficacy of these distance delivered interventions to in-person treatment is needed [17,18].

#### Limitations/ concerns

While there are evident advantages in the use of telemental health care, studies also note many key concerns with the delivery of quality online care. Some concerns include: skill needed to use technologies associated with care, need for investment in equipment and regular upgrades, availability of reliable internet access, issues with technology and connection, standardized evaluation of service efficiency, unclear quality, control, and standards, and ethical concerns such as confidentiality and crisis management [14,15].

Of special interest in the Telehealth field is a recent research on EMDR therapy because this is the first Randomized Controlled Trial (RCT) on early intervention with an evidence-based trauma-focus (TF) therapy (e.g., EMDR, TF-CBT) provided online in a group format and intensive treatment modality to healthcare professionals working in hospitals during the COVID-19 pandemic. This randomized controlled trial provides evidence for the effectiveness, efficacy, feasibility, and safety of the EMDR-Integrative Group Treatment Protocol for Ongoing Traumatic stress Remote (EMDR-IGTP-OTS-R) in reducing posttraumatic stress, anxiety, and depression symptoms for healthcare professionals working in hospitals during the Covid-19 pandemic, expanding the EMDR therapy frontiers [21].

## Acute Stress Syndrome Stabilization Remote Individual (ASSYST-RI) Procedure

The Acute Stress Syndrome Stabilization Individual Remote (ASSYST) procedure is an Adaptive Information Processing (AIP)-informed, carefully field-tested, refined, and user-friendly psychophysiological algorithmic approach, whose reference is the EMDR Protocol for Recent Critical Incidents and Ongoing Traumatic Stress (EMDR-PRECI), specially designed to provide online support to clients who present ASD or PTSD intense psychological distress and/or physiological/somatic reactivity caused by the disorder's intrusion symptoms (e.g., sensory, emotional, or physiological components of the intrusive distressing memories) [22-24]. The objective of this procedure is focused on the client's nervous system activation regulation (stabilization) through the reduction (desensitization) or removal of the activation produced by the sensory, emotional, or physiological (somatic-sensory) components of the intrusive distressing/pathogenic memories of adverse experiences, to achieve optimal levels of nervous system activation; thus, facilitating the Adaptive Information Processing System (AIP) the subsequent adaptive processing of the information [25].

## Objective

The objective of this field trial was to evaluate the feasibility and effectiveness of the Acute Stress Syndrome Stabilization Remote Individual (ASSYST-RI) in decreasing the levels of subjective perceived disturbance produced by the psychological distress or physiological reactivity of recent adverse experiences (e.g., kidnappings, COVID-19-related distress, interpersonal violence).

## Method

### Study Design

To measure the effectiveness of the ASSYST-RI on the reduction of the levels of subjective perceived disturbance, this study used a pre-post-treatment design, with the Subjective Units of Disturbance (SUD) as a dependent variable. The SUD

scores were measured in two-time points for all participants in the study: Time 1. Pre-treatment assessment; and Time 2. Post-treatment assessment.

## Ethics

The research protocol was reviewed and approved by the EMDR Mexico International Research Ethics Review Board (also known in the United States of America as an Institutional Review Board) in compliance with the International Committee of Medical Journal Editors recommendations, the Guidelines for Good Clinical Practice of the European Medicines Agency (version 1 December 2016) and the Helsinki Declaration as revised in 2013.

## Participants

This study was conducted in Mexico during the years 2019 and 2020 (during the COVID-19 pandemic confinement) with 39 female and 9 male participants ranging in ages from 18 to 67 years old ( $M=37.1$  years). Participation was voluntary with the participant's verbal informed consent in accordance with the Mental Capacity Act 2005. A total of 48 people participated in the research project explanation, attended the intake interview, and fulfilled the inclusion criteria. The inclusion criteria were based on the following characteristics: (a) being an adult who had experienced recent adverse experiences, (b) being experiencing psychological distress and/or physiological/somatic reactivity related to the adverse experience's intrusive distressing memories, (c) voluntarily participating in the study, (d) not receiving drug therapy for posttraumatic stress symptoms, and (e) not receiving specialized trauma therapy. The exclusion criteria were based on the following characteristics: (a) ongoing self-harm/suicidal or homicidal ideation, (b) diagnosis of schizophrenia, psychotic or bipolar disorder, (c) diagnosis of dissociative disorder, (d) organic mental disorder, (e) current, active chemical dependency problem, (f) significant cognitive impairment (e.g., severe intellectual disability, dementia), and (g) presence of uncontrolled symptoms due to medical illness.

## Instrument

The Subjective Units of Disturbance Scale (SUDS) is designed to provide a measure of the disturbance as subjectively experienced by the participant, who is asked to indicate the level of disturbance associated with the target event (i.e., the intrusive distressing memories) by choosing a number on a 0 (no disturbance) to 10 (highest possible disturbance) scale [26-27]. Kim, Bae, and Park confirmed that the SUDS scores obtained during counseling sessions have good psychometric properties, with evidence of convergent and discriminant validity, concurrent validity, and predictive validity [28].

## Procedure

During time 1, research assistants (all mental health professionals) conducted the intake interview by phone, assessed potential participants for eligibility based on the inclusion/

exclusion criteria, collected their data (e.g., name, age, gender, profession, email, telephone), obtained verbal informed consent, enrolled participants in the study, sent the participant's data to the data safe-keeper independent assessor and sent to the licensed professionals counselors/therapist coordinator (LPC) the participant's name and email. The LPC randomly assigned the participants to the counselors/therapist. The counselors/therapist collected the recent adverse experience' pre-treatment SUD scores at the beginning of the ASSYST-RI intervention. During Time 2, the counselors/therapist collected the same recent adverse experience post-treatment SUD scores at the end of the intervention and sent the results to the data safe-keeper independent assessor.

All data was collected, stored, and handled in full compliance with the EMDR Mexico International Research Ethics Review Board requirements to ensure confidentiality. Each study participant gave their consent for access to their data, which was strictly required for study quality control. All persons involved in this research project were subject to professional confidentiality.

### Withdrawal from the study

All research participants had the right to withdrawal from the study without justification at any time and with assurances of no prejudicial result. If participants decided to withdraw from the study, they were no longer followed up in the research protocol. There were no withdrawals from this study.

### Treatment

In this study, the individual ASSYST-RI procedure was provided in a one-on-one, online video setting in compliance with the American Psychological Association (APA) Guidelines for the Practice of Telepsychology and by using a Health Insurance Portability and Accountability Act (HIPAA)-compliant platform. This video online format allowed the participants to experience the treatment in a safe environment (e.g., homes) Participants completed a total of one-single session with an average of 50-minutes duration.

### Counselors/therapists and treatment fidelity

Provision of the ASSYST-Remote was provided by licensed professional counselors/therapists formally trained in the procedure administration. Treatment fidelity and adherence to the procedure was fulfilled by strict observance to all steps of the scripted procedure.

### ASSYST-remote individual procedure description and tolerance

An individual history-taking and assessment session was conducted for each participant to determine their suitability

and readiness for ASSYST-RI procedure sessions. The procedure was provided by a trained and licensed counselors/therapist in a one-on-one, video online/remote setting in compliance with the American Psychological Association (APA) Guidelines for the Practice of Telepsychology and by using a HIPAA-compliant platform. Each of the participants received one-single session. The ASSYST-RI sessions focused only on the intrusive, distressing memories related to their reported recent adverse experience. During this process, participants followed directions from the clinician working on their distressing memories. Each session lasted an average of 50-minutes.

Participants in this study used the Butterfly Hug (BH) as a self-administered bilateral stimulation method to process the intrusive, distressing memories [29]. During the BH, patients were instructed to stop when they felt in their body that it had been enough. The instruction allows for enough sets of bilateral stimulation (BLS) for processing of the disturbing material and helps to regulate the stimulation to maintain the patients in their window of tolerance allowing for appropriate stabilization [30, 31]. All participants had the opportunity to process more than one memory. No adverse effects were reported during or after the sessions.

Examples of the critical incidents experienced by the participants, include: medical staff working in COVID-19 hospitals; people locked in quarantine during COVID-19 pandemic; interpersonal violence experiences; panic attacks; sexual violation; assaults and attacks; family stressors; kidnappings; medical trauma experiences; automobile accidents; death of a child; infidelity discoveries; and an attempted suicide.

### Statistical analysis

A within-subjects t-test analysis was used to compare pre-treatment and post-treatment measurements. Cohen's d effect size was calculated to report to the effect size. Subjective units of disturbance were measured using the SUDS, and statistical analysis was conducted for all participants who fulfilled the inclusion criteria at the beginning of the study and who completed the post-assessment measurement. Analysis of variance (ANOVA) for repeated measurements was used for the Subjective Units of Disturbance (SUD); t test and Cohen's d effect size were calculated using within and between designs for the different mean comparisons.

### Results

The results from the pre-test ( $M = 8.27$ ,  $SD = 1.69$ ) and post-test ( $M = 1.45$ ,  $SD = 1.66$ ) indicate that the application of the ASSYST-Remote Individual Procedure resulted in a significant decrease in the subjective units of disturbance, with a large effect size, according Cohen's d calculation (3.32). See Figure 1 below.

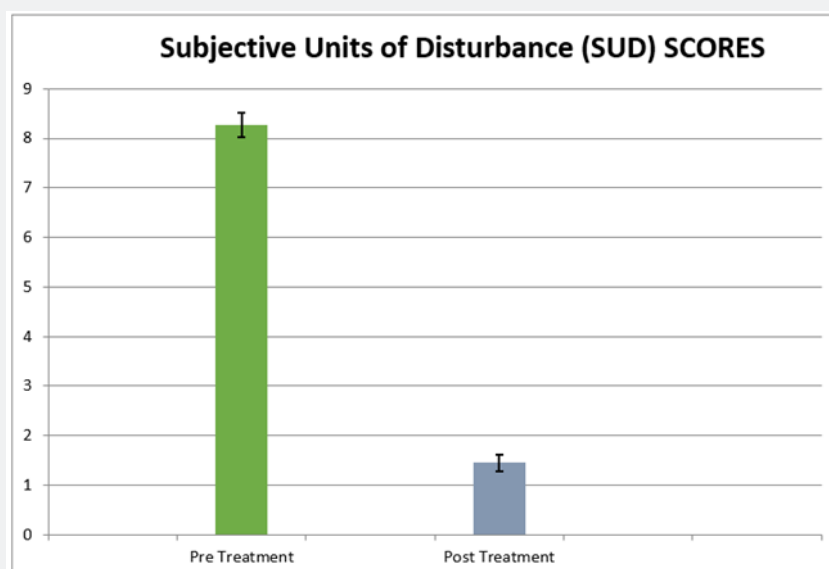


Figure 1: Mean scores and standard error for pre- and post-measures.

## Discussion

The aim of this field trial was to evaluate the feasibility and effectiveness of the Acute Stress Syndrome Stabilization Remote Individual (ASSYST-RI) in decreasing the levels of subjective perceived disturbance produced by the psychological distress or physiological reactivity of recent adverse experiences (e.g., kidnappings, COVID-19-related distress, interpersonal violence). A total of 48 participants (39 females and 9 males) ranging in ages from 18 to 67 years old ( $M=37.1$  years) received one-single ASSYST-RI session of 50 minutes average duration. Participants was voluntary with the participants' verbal informed consent in accordance with the Mental Capacity Act 2005. The telemental health counseling was in compliance with the American Psychological Association (APA) Guidelines and protocols for the Practice of Telepsychology. Results showed significant differences when comparing pre and post-test, with a large effect confirming the decrease of the Subjective Units of Disturbance (SUD).

Adverse experiences are an unfortunate and inevitable aspect of life. The number of traumatized individuals in the world is staggering and the need for swift, effective and accessible interventions is crucial. Experiences such as, interpersonal violence, kidnappings, traumatic deaths and losses of loved ones, health-related distress, and vicarious trauma working in helping professions are just a few examples that affect people all over the world. Ensuring their mental health using evidence-based and cost-effective online approaches that can be delivered quickly is an ethical imperative. Authors of this paper will plan to share results of this study at the PHEPREN and GFBR Joint Seminar: Ethics of data sharing in health research. ASSYST-Remote can help to scale

up telemental health options and can reduce cultural resistance to treatment because it is minimally intrusive and does not require a detailed narrative of one's traumatic experience. It can also be utilized as an early intervention after an adverse experience to offer rapid response support.

## Conclusion, Limitations and Future Directions

Adverse life experiences can happen suddenly, can cause significant strain on one's work, health, relationships, and mental state, and can be challenging for one to treat in accessible and affordable ways. This field trial provides preliminary evidence on the ASSYST-RI feasibility and effectiveness in decreasing the levels of subjective perceived disturbance produced by the psychological distress or physiological reactivity of recent adverse experiences. The main limitations of this study are the lack of a comparison group and the small sample. We recommend randomized controlled trials using instruments to measure anxiety, depression and PTSD symptoms or PTSD diagnosis.

## Conflict of Interest and Founding

The authors have no relevant financial interest or affiliation with any commercial interest related to the subjects discussed in the article. This research received no specific grant from any funding agency, commercial or not-for-profit sectors.

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