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Internal Family Systems (IFS) Therapy for Posttraumatic Stress Disorder (PTSD) among Survivors of Multiple Childhood Trauma: A Pilot Effectiveness Study

Hilary B. Hodgdon^{a,b}, Frank G. Anderson^c, Elizabeth Southwell^{d,e}, Wendy Hrubec^c, and Richard Schwartz^f

^aResearch Director, the Trauma Center at JRI, Brookline, MA, USA; ^bPsychology Department, Research Assistant Professor of Clinical Practice, Suffolk University, Boston, Ma, USA; ^cThe Foundation for Self Leadership, Oak Park, IL, USA; ^dResearch Assistant, the Trauma Center at JRI, Brookline, MA, USA; ^eSmith College, School for Social Work, Northampton, Ma, USA; ^fThe Foundation for Self Leadership, Oak Park, IL, USA

ABSTRACT

Posttraumatic stress disorder (PTSD) is a debilitating condition and exposure to multiple types of childhood trauma contributes to higher co-occurring symptoms. This pilot research explores effectiveness of a novel intervention, Internal Family Systems (IFS) therapy, for treatment of PTSD and associated symptoms and problems, including depression, dissociation, somatization, affect dysregulation, and disrupted self-perception (i.e. shame/guilt) among adults exposed to multiple childhood trauma. Seventeen adults with PTSD and history of multiple childhood traumas participated in an uncontrolled trial of IFS, receiving 16, 90-min IFS sessions and completing four evaluations (pre-, mid-, and post-treatment, and 1-month follow-up) assessing PTSD symptoms and diagnosis, as well as multiple secondary outcomes (e.g., symptoms of depression, dissociation, and somatization, affect dysregulation, disrupted self-perception, interoceptive awareness, and self-compassion). Intent-to-treat analyses using multilevel growth curve modeling and examination of effect sizes demonstrated significant decreases in symptoms of PTSD ($d = -4.46$ and -3.05 as measured by the CAPS and DTS respectively), associated features of PTSD (e.g., total score on a measure of dissociation, somatization, affect dysregulation, self-perception; $d = -1.27$), and depression ($d = -1.51$) across the study period. A medium effect size in the expected direction was observed for self-compassion ($d = .72$). Small to large effect sizes in the expected direction were observed for multiple indicators of interoceptive awareness (range $d = .27$ – 1.21). Results provide preliminary support for IFS as a promising practice for the treatment of PTSD among adults with a history of childhood trauma.

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Introduction

Posttraumatic Stress Disorder (PTSD) is a prevalent and disabling condition that can persist for many years and is often associated with exposure to multiple traumatic events (Kessler, 2000). Exposure to multiple types of trauma during childhood has particularly deleterious consequences (Cloitre et al., 2009; Karam et al., 2014; Kessler, 2000). With increasing exposure to trauma in childhood, comes increasing risk for both severity (Steine et al., 2017) and range (Cloitre et al., 2009) of mental health symptoms. This includes severity of PTSD (Steine et al., 2017), but also increased risk for symptoms of depression, dissociation, somatization, affect dysregulation, and disrupted self-perceptions, such as shame and guilt (Deering et al., 1996; López-Castro et al., 2019; Luxenberg et al., 2001). A study of a large population-based sample of over 50,000 adults showed that PTSD secondary to multiple traumatic events was associated with greater functional impairment, higher co-occurrence of mood and anxiety disorders, and an earlier age of onset and longer duration of exposure to trauma, than PTSD related to a single incident trauma (Karam et al., 2014). Because survivors of multiple types of childhood trauma often display symptoms that include, but also go beyond, PTSD, this population would benefit from interventions that address a range of symptoms.

A significant evidence base exists for PTSD treatments that focus on exposure to traumatic memories and cognitive restructuring (see Bradley et al., 2005; Cusack et al., 2016 for meta-analyses), in order to reduce symptoms of PTSD. Both exposure-based approaches, Prolonged Exposure (PE; Foa et al., 2008) for example, and cognitive-behavioral approaches, such as Cognitive Processing Therapy (CPT; Resick & Schnicke, 1993), are effective in reducing symptoms of PTSD and depression (Cusack et al., 2016), and, in the case of CPT, dissociation (Resick et al., 2012). While these approaches benefit many, reviews and meta-analyses demonstrate that a substantial portion of individuals do not benefit, or do not benefit fully, from currently available treatments (Bradley et al., 2005; Larsen et al., 2019; Schottenbauer et al., 2008). A review of over 50 randomized control trials (RCTs) for PTSD demonstrated that a substantial portion of participants continue to report significant symptoms of PTSD (31–59%) or depression (19%) post-treatment (Larsen et al., 2019). Another review of RCTs for PTSD found non-response rates as high as 50% (Schottenbauer et al., 2008). Therefore, a subset of individuals may benefit from alternative approaches to the treatment of traumatic sequelae.

History of exposure to multiple types of childhood trauma and subsequent clinical complexity is one explanation for attenuated treatment response among some individuals. Examination of efficacy of treatments for PTSD related to childhood trauma is studied far less than adult onset trauma (Cloitre et al., 2010). Some studies examining the influence of

childhood sexual and physical abuse on PTSD treatment show equivalent outcomes (Resick et al., 2014; Walter et al., 2014). However, when physical and emotional neglect are accounted for, treatment response is attenuated among survivors of multiple childhood trauma (Bosch et al., 2020). One study of adult women with PTSD who received CPT showed that the number of childhood abuse experiences was predictive of higher post-treatment PTSD symptom severity, while the number of adult interpersonal traumas was not, and these differences were not minimal as every additional childhood trauma exposure corresponded to a 3-point increase on the post-treatment CAPS score (Bosch et al., 2020). In addition, there is limited research to date that addresses the effectiveness of PTSD treatments in ameliorating co-occurring traumatic sequelae (e.g., dissociation, affect dysregulation, and/or somatization) among PTSD patients with multiple childhood traumas. One treatment approach – Skills Training in Affect and Interpersonal Regulation (STAIR; Cloitre et al., 2010) – has demonstrated efficacy in addressing the PTSD and regulation problems among adults with childhood trauma histories, when utilized in combination with exposure. This approach is focused on building regulation skills as part of a phase-based approach to treatment of PTSD. However, there is little to no research to date that examines treatment of the full range of traumatic sequelae noted above among survivors of childhood trauma with PTSD.

In addition to the clinical complexity described above, some survivors of multiple childhood trauma also display significant disruptions in their self-concept (Cole & Putnam, 1992; Pelcovitz et al., 1997). This results in feelings of self-blame, shame and self-loathing (López-Castro et al., 2019). Feelings of shame and of being “damaged” are more likely to be observed among survivors of childhood onset interpersonal trauma, in comparison to adult onset interpersonal trauma (Pelcovitz et al., 1997). Moreover, feelings of shame have been shown to moderate the association between aspects of interpersonal trauma (e.g., emotional abuse and isolation) and severity of PTSD symptoms (G. Beck et al., 2011). This highlights that addressing negative self-perceptions such as shame may be a particularly relevant treatment target in interventions for PTSD (López-Castro et al., 2019). Addressing negative self-perception through fostering mindfulness, self-compassion and self-acceptance, as opposed to altering thinking patterns, represents an alternative change agent that may be more tolerable and effective for some trauma-impacted individuals (Au et al., 2017). A small body of research of interventions that build self-compassion (Au et al., 2017; Gilbert & Procter, 2006) or focus on mindfulness and self-acceptance (Luoma et al., 2012) have shown promise for reducing shame, but currently no treatment integrates these various components within one treatment framework for PTSD.

In sum, survivors of multiple childhood trauma with PTSD are more likely to display a complex symptom profile including co-occurring symptoms of depression, dissociation, somatization, and affect dysregulation, as well as disrupted self-perception (Cloitre et al., 2009). While current treatments are effective for reducing depression and improving regulation, there is little research examining effectiveness for ameliorating the other co-occurring symptoms noted above. In addition, a significant sub-set of individuals continue to display clinically significant symptoms post-treatment (Bradley et al., 2005; Larsen et al., 2019; Schottenbauer et al., 2008) and survivors of multiple childhood trauma may benefit less than survivors of adult onset trauma (Bosch et al., 2020). Finally, interventions that use alternative approaches to exposure or cognitive restructuring, such as those focused on building self-compassion and mindfulness, are understudied and there is no approach that integrates these components within one framework.

Internal family systems: A promising approach for childhood trauma survivors

Internal Family Systems (IFS; Schwartz, 2013; Schwartz & Sweezy, 2020) is an individual and group therapy approach designed to be utilized with adults who display a wide range of clinical presentations secondary to trauma exposure (Anderson et al., 2017), including clinical problems that are understudied in the research on existing evidenced based practices for trauma (i.e. dissociation, somatization, and affect dysregulation; Anderson, 2021). IFS draws upon mindfulness, self-compassion, self-acceptance, systems theory, multiplicity of the mind, and trauma theories. IFS theorizes that the mind is a plural entity with numerous subpersonalities, coined “Parts,” that comprise an internal system often organized around a traumatic experience. In addition, IFS holds as one of its core assumptions, that each person has an inherent internal capacity for healing, referred to as the Self, that acts as our intuitive, core emotional and intellectual center. Parts are conceptualized into two broad categories; those that hold painful and/or overwhelming emotions, thoughts, and memories (i.e. vulnerable parts) and those that serve to distract from, cope with, and /or survive these distressing states (i.e. protective parts). The IFS model theorizes that parts are often representations of memories, emotions, thoughts, and behaviors including those representations of early childhood trauma.

Psychopathology in IFS is viewed as a behavioral manifestation of activated protective parts. In other words, symptoms of PTSD (avoidance, hyperarousal or emotional numbing, for example) or other psychiatric disorders such as depression, anxiety or dissociation are conceptualized as the internal system’s best attempt to survive and cope with distressing and overwhelming emotions and memories held within vulnerable parts. For example, for a client who is

abusing drugs or alcohol, the problematic use of substances would be viewed as a protective parts' best attempt to manage, numb, and/or distract from some underlying, intolerable emotional pain such as feeling unloved (Anderson et al., 2017).

IFS therapy focuses on enhancing ability to attend to difficult and distressing internal experiences (i.e. "vulnerable parts") mindfully and with self-compassion (i.e. from the Self), in order to increase capacity to successfully "be with" or tolerate and process traumatic material. A core goal of IFS is to foster specific mental states during the therapy session that support engagement of the client's compassionate Self, which fosters a safe internal environment that enhances processing of traumatic memories and promotes healing, including curiosity, calm, clarity, connectedness, courage, creativity, and compassion (Anderson et al., 2017).

Self-compassion, a particular focus of IFS, has been shown to mediate the association between childhood trauma exposure and PTSD symptoms (Barlow et al., 2017). Because survivors of trauma often exhibit a notable and disruptive degree of self-blame and shame regarding traumatic experiences (López-Castro et al., 2019), fostering self-compassion may be a particularly effective change agent. Self-compassion has been associated with multiple indicators of well-being (Neff et al., 2007) and lower levels of depression, anxiety, stress, and body shame (Neff et al., 2017). In addition, IFS utilizes mindful observation and connection with bodily sensations in order to increase interoceptive awareness, another potent therapeutic target for increasing ability to tolerate the difficult feelings and sensations experienced in PTSD (Van der Kolk, 2006). Finally, IFS utilizes the inherent wisdom of the Self to address and rework cognitive distortions that are commonly associated with childhood traumatic experiences in a non-confrontational and non-shaming manner. While a full description of all of the components of IFS is beyond the scope of this article, we refer to reader to the IFS Skills Training Manual for a more complete overview (Anderson et al., 2017).

To date no research has been conducted examining the effectiveness of IFS for reducing symptoms of PTSD or psychological symptoms that frequently co-occur with PTSD, such as dissociation, somatization, or affect dysregulation, that IFS purports to address. There is research showing the efficacy of IFS for reducing symptoms of depression, anxiety, and physical pain and increasing self-compassion among patients with rheumatoid arthritis (Shadick et al., 2013). The ReSource Project (Bockler et al., 2017) conducted research using the IFS concept of parts that showed that people who are able to identify and connect with their parts are better able to know another person's perspective and mental state, also known as Theory of Mind. A recent case study (Sweezy, 2018) noted that the IFS approach was useful for addressing shame in treatment of a client exposed to multiple childhood trauma. IFS is particularly well suited for work with individuals

who display such clinical complexity, as it considers and targets all types of trauma-related symptoms, not just those stemming from PTSD. Therefore, research is needed to examine the utility of IFS for these clinical presentations. In addition, clinicians who work from a client centered or psychodynamic background may find that IFS dovetails more closely with their theoretical orientation than cognitive behavioral or exposure-based approaches.

The primary aim of this pilot research was to conduct an initial effectiveness study of IFS for the treatment of PTSD among survivors of multiple childhood trauma, as well as clinical symptoms and problems that are commonly observed in tandem with PTSD (e.g., depression, dissociation, affect dysregulation, somatization, disrupted self-perception). An exploratory aim of the study was to examine change in indicators of possible IFS mechanisms, including self-compassion and interoceptive awareness, in order to inform future research on IFS. The primary outcome measure was degree of change in PTSD symptom severity. Secondary outcome measures were loss of PTSD diagnosis, degree of change in severity of depression, dissociation, somatization, affect dysregulation, and disrupted self-perception, and degree of change in self-compassion and interoceptive awareness.

Study Hypotheses were as follows:

- (1) Childhood trauma survivors who engage in IFS treatment will demonstrate significant reductions in severity of PTSD symptoms.
- (2) Childhood trauma survivors who engage in IFS treatment will demonstrate significant reductions in severity of clinical problems that co-occur with PTSD, including; depression, dissociation, somatization, affect dysregulation, and disrupted self-perception.
- (3) Childhood trauma survivors who engage in IFS treatment will demonstrate significant increases in self-compassion and indicators of interoceptive awareness (exploratory).

Method

Design

This uncontrolled pilot study of 16, 90-min individual IFS sessions delivered by community practitioners utilized a within-subjects design measuring change in outcome indicators across the study period; all participants received the intervention. Methods and procedures are summarized below. Participants gave written informed consent and the study was approved by the Justice Resource Institute Institutional Review Board (number 2014-02).

Participants

The study was conducted in an ethnically and socio-economically diverse, large metropolitan area in the Northeastern United States. Participants were recruited via study flyers posted in the surrounding community, to the Trauma Center at JRI's website, and circulated to IFS practitioners via a list serve. Study inclusion criteria were: (1) exposure to two or more types of trauma prior to the age of 18, (2) current diagnosis of PTSD per DSM-IV-TR diagnostic criteria on the CAPS (Blake et al., 1995) per scoring rules delineated by Weathers et al. (1999), and (3) clinically significant symptoms of depression per a total score of 14 or above on the BDI (A.T. Beck et al., 1961). Study exclusion criteria were: (1) previous IFS treatment, (2) current diagnosis of a psychotic disorder or substance/alcohol dependence, or (3) GAF score under 40. Participants were not excluded due to the presence of recent (i.e. past 2-months) suicidal ideation/self-harm.

Intervention

IFS treatment (Anderson et al., 2017; Schwartz & Sweezy, 2020) consisted of 16 weekly, individual 90-min in-person outpatient sessions with licensed community practitioners at varying locations. Practitioners had experience working with individuals with histories of childhood trauma and completed three levels of IFS training (158 hours), and an intensive IFS certification process (e.g., additional supervision, continuing education and video-taped demonstration of IFS therapeutic skills). Practitioners received monthly IFS supervision with the model developer (Schwartz) in order to ensure fidelity. In addition, 20% of IFS sessions were videotaped and coded for fidelity by independent raters (Cronbach's $\alpha = .96$). Participants enrolled in the study continued preexisting treatment and/or psychotropic medications during the study period and refrained from adding other interventions or medication.

Measures

Primary outcome measures

PTSD Symptoms. Change in PTSD symptom severity was assessed by the Clinician Administered PTSD Scale (CAPS; Blake et al., 1995) for DSM IV,¹ a 30-item semi-structured clinical interview assessing PTSD diagnosis corresponding to DSM-IV-TR criteria and total symptom severity over the prior month. Each symptom is rated from 0 to 4 for frequency and intensity

¹Study data were collected between 2015 and 2016, before training materials for the DSM 5 version of the CAPS were publicly available. Therefore, the DSM IV version of the CAPS was used in this study.

separately. Total CAPS score ranges from 0 to 136 with a score of 65 or higher being considered clinically significant. The CAPS has sound psychometric properties across a wide variety of clinical populations and research settings (Weathers et al., 2001), with high test–retest reliability (ranging from .90 to .98) and internal consistency ($\alpha = .94$; Blake et al., 1995).

In order to capture change in self-reported PTSD symptom severity and assess rate of change at mid-treatment, the Davidson Trauma Scale (DTS; Davidson et al., 2002) was also administered. The DTS is a 17-item self-report measure of PTSD assessing the severity and frequency of PTSD symptoms occurring over the previous week corresponding to DSM-IV-TR criteria. Each item rates frequency and severity on a 0–4 scale. Total scores range from 0 to 136 and individuals with PTSD following acute trauma obtained a mean score of 62 ($SD = 38.0$; Davidson et al., 2002). The internal consistency of the DTS is high ($\alpha = .97$) and the scale demonstrates excellent concurrent, convergent, and divergent validity (McDonald et al., 2009).

Secondary outcome measures

Symptoms of depression. The Beck Depression Inventory (BDI; A.T. Beck et al., 1961) is a 21-item, self-report measure of depressive symptoms. Symptoms are rated from 0 to 3 and then summed, creating a total score ranging from 0 to 63, with scores of 11+ indicating clinically significant depression. The BDI has excellent internal consistency ($\alpha = .90$) and retest reliability ($\alpha = .96$), as well as concurrent, content, and structural validity (Wang & Gorenstein, 2013).

Symptoms of dissociation, somatization, affect regulation, and disrupted self-perception. The Structured Interview for Disorders of Extreme Stress, Self-Report version (SIDES-SR; Pelcovitz et al., 1997), is a 45-item assessment of past and current functioning on six dimensions: (1) affect regulation, (2) amnesia and dissociation, (3) somatization, (4) disruptions in self-perception (i.e. shame/guilt), (5) relationships with others, and (6) disrupted systems of meaning, representing the areas of impairment of the Disorders of Extreme Stress (DESNOS) construct in the DSM-IV Associated Features of PTSD. Respondents rate symptom severity during the past month from 0 to 3. Total and subscale scores are created by summing appropriate items, with total scores ranging from 0 to 135. Internal consistency of the full measure is high ($\alpha = .93$) on all subscales with the exception of somatization ($\alpha = .68$) demonstrate strong internal consistency (α ranged from .74 to .82; Zlotnick & Pearlstein, 1997).

Self-Compassion. The Self Compassion Scale (SCS; Neff, 2003), is a 26-item (rated from 1 to 5) self-report measure assessing self-kindness, common humanity, and mindfulness. The scoring guidelines by Neff et al. (2017) were used to calculate a total score by computing the mean of all items. The SCS has sound psychometric properties (Neff et al., 2017).

Interoceptive Awareness. The Multidimensional Assessment of Interoceptive Awareness (MAIA; Mehling et al., 2012) is a 32-item self-report measure comprised of eight subscales measuring five constructs: awareness of body sensations (noticing), emotional reaction and attentional response to sensations (not-distracting, not-worrying), attention regulation, awareness of mind-body integration (emotional awareness, self-regulation and body listening), and trusting body sensations. Subscales are scored separately (range 0 to 5) and have adequate internal consistency (α range .66 to .82) and construct validity.

Procedure

All phone screening, consent, and study evaluation activities were completed by either the study Principal Investigator (PI), a Licensed Clinical Psychologist, or by a bachelor-level research assistant who was supervised directly by the PI. Interested participants were contacted to complete a phone screen to assess initial eligibility (e.g., appropriate age, no prior IFS treatment, history of exposure to two or more types of trauma before the age of 18). Participants then completed an in-person evaluation to determine study eligibility and assess baseline symptoms, including the CAPS for DSM IV and the BDI. In addition, information on childhood trauma history (Traumatic Antecedents Questionnaire; Luxenberg et al., 2001), sociodemographic characteristics, and measures of secondary outcome measures were collected. Data presented here were collected between January 2015 and August 2016.

Trained interviewers administered the CAPS at the baseline (pre-treatment) to establish PTSD diagnosis and symptom severity, and at the post-treatment and 1 month follow-up assessments. Participants completed self-report measures (DTS, BDI, SIDES, NCS, and MAIA); (1) at baseline, (2) after session 8 of IFS, (3) after session 16 of IFS, and (4) 1 month after completing IFS treatment. All evaluation data were collected and analyzed by the Principal Investigator, whose role was to conduct an independent evaluation of IFS. The Trauma Center at JRI research staff had no affiliation with IFS or the Foundation for Self-Leadership.

Statistical analysis

Multilevel growth curve modeling was used to examine change in symptom severity of posttraumatic stress (PTS), depression, dissociation, somatization, and affect regulation, and self-compassion and interoceptive awareness over the course of the study period. Multilevel models have become the standard for analyzing psychotherapy outcome data because of several advantages that this approach offers (i.e., efficiency in dealing with missing observations, efficient and powerful estimation techniques,

tremendous modeling flexibility; Singer & Willett, 2003). For the current study, time was modeled by including the number of weeks since the baseline assessment (0, 8, 16, and 20, for the pre-treatment, mid-treatment, post-treatment, and one-month post-treatment assessments). Effect sizes (Cohen's *d*) were calculated for each outcome measure using the procedure described by Feingold (2009) producing effect size estimates that are comparable to those derived from more traditional repeated measures designs (e.g., repeated measures ANOVA). A statistical significance level of 0.05 was adhered to for all analyses. Analyses were based on an intent-to-treat (ITT) approach including all available data. The MPlus software package (Version 7; Muthen & Muthen, 2010) was used to analyze the data.

Results

Participant characteristics

Participants were 17 adults ages 28 to 58 ($M = 46$ years, 76% female, 89% Caucasian, 11% Biracial, 94% at least some college education) with a history of exposure to at least two forms of childhood trauma (range 2–6 trauma types, $M = 3.29$, $SD = 1.10$) with sexual (65%), psychological (65%) and physical (59%) abuse being the most common types reported. The baseline, pre-treatment means for all study measures are presented in Table 1. The sample displayed a moderate, but clinically significant level of PTSD symptom severity at baseline (CAPS $M = 70.82$, $SD = 9.80$, DTS $M = 63.89$, $SD = 13.00$), as well as clinically significant depression (BDI $M = 22.32$, $SD = 9.92$).

Participant flow

Of the 27 participants assessed for eligibility, 20 completed the in person research evaluation, and 17 participants met study criteria and were assigned to an IFS therapist. Four participants completed fewer than 12 sessions of IFS and were classified as drop outs. Cited reasons for dropping out were logistical (e.g., difficulty finding time to attend sessions, increased demands at work interfering with ability to participate, distance to therapist's office, etc.). These participants completed an average of five IFS sessions. Thirteen participants completed all 16 sessions of IFS. Study analyses were conducted using the Intent-to-Treat (ITT) sample comprised all participants, regardless of dropout status. (See Figure 1 for flow diagram)

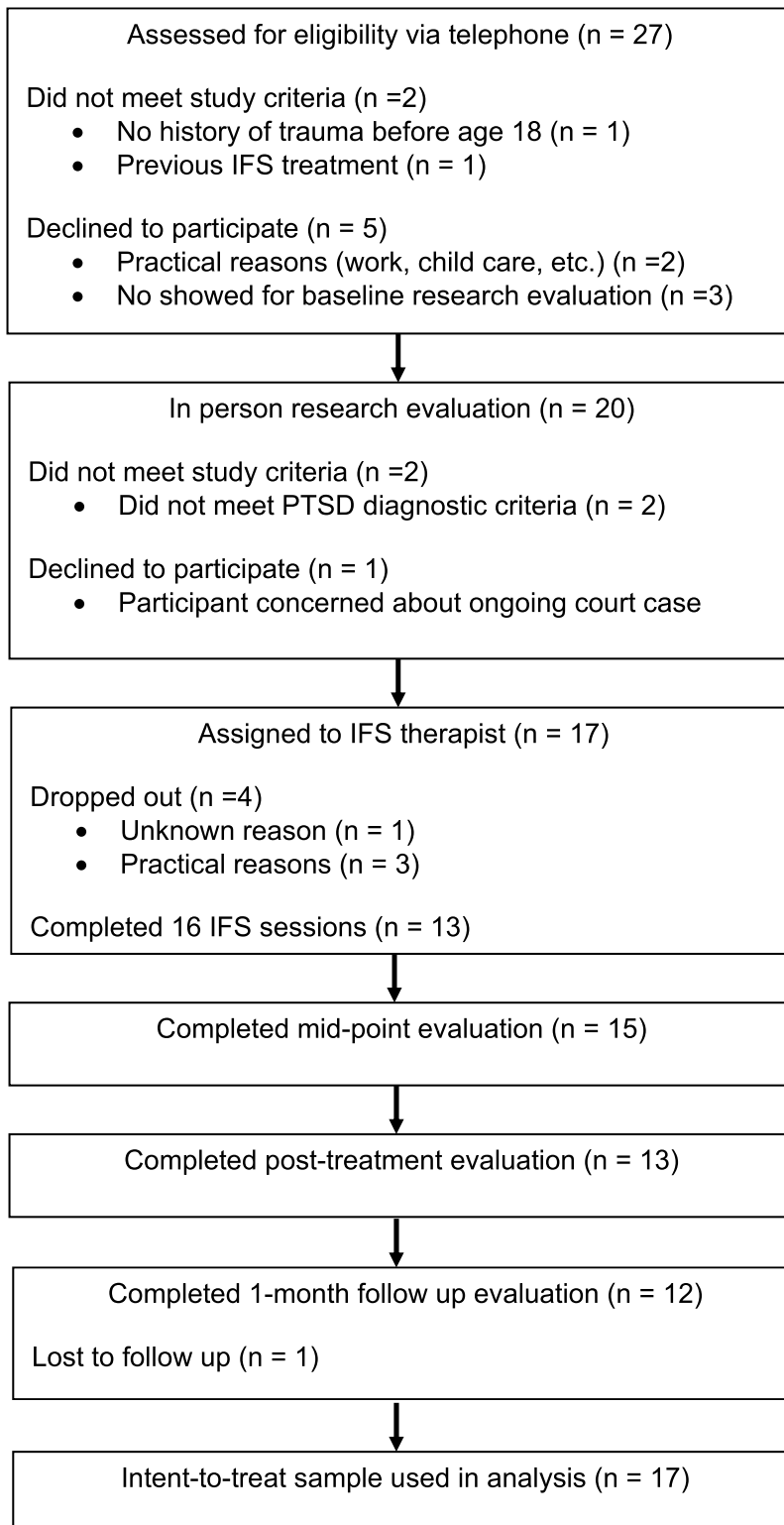


Figure 1. Participant flow through the study

Study outcomes

The means and standard deviations of the primary and secondary outcome variables by time point, change indicators, and effect sizes are presented in Table 1.

Table 1. Pre-, mid-, and post-treatment and one-month follow up means, standard deviations and change estimates for study variables.

| Variable | Pre <i>M (SD)</i> | Mid <i>M (SD)</i> | Pst <i>M (SD)</i> | FU <i>M (SD)</i> | ΔPre- Pst <i>M</i> | Effect Size <i>d</i> | ΔPre-FU <i>M</i> | Effect Size <i>d</i> |
|------------------------------------|----------------------|----------------------|----------------------|---------------------|--------------------------|----------------------------|---------------------|----------------------------|
| Primary Outcome Measures | | | | | | | | |
| CAPS PTSD Symptom Severity | 70.82 (9.80) | | 43.26 (21.58) | 27.14 (19.28) | -27.56 | -2.81 | -43.68** | -4.46 |
| Davidson Trauma Scale | 63.89 (13.00) | 43.97 (23.49) | 24.04 (16.64) | 24.19 (18.92) | -39.85 | -3.06 | -39.71** | -3.05 |
| Secondary Outcome Measures | | | | | | | | |
| Beck Depression Inventory | 22.32 (9.92) | 14.39 (9.10) | 6.47 (5.82) | 7.32 (7.52) | -15.84 | -1.6 | -14.99** | -1.51 |
| SIDES-SR Total | 37.46 (12.94) | 28.44 (12.86) | 19.42 (13.77) | 18.52 (12.35) | -18.04 | -1.21 | -18.94* | -1.27 |
| SIDES-SR Affect Dysregulation | 13.89 (5.93) | 10.23 (4.08) | 6.56 (5.13) | 6.22 (4.21) | -7.34 | -1.24 | -7.68† | -1.29 |
| SIDES-SR Dissociation | 5.73 (2.62) | 4.53 (2.58) | 3.32 (1.85) | 2.78 (2.30) | -2.41 | -0.92 | -2.95 | -1.13 |
| SIDES-SR Self Perception | 6.45 (3.14) | 4.94 (3.53) | 3.42 (3.86) | 3.02 (3.39) | -3.04 | -0.97 | -3.43 | -1.09 |
| SIDES-SR Relationships | 4.99 (2.12) | 3.84 (2.58) | 2.69 (2.64) | 2.94 (2.55) | -2.29 | -1.08 | -2.05† | -0.97 |
| SIDES-SR Somatization | 1.89 (1.19) | 1.66 (1.67) | 1.42 (1.67) | 1.92 (1.78) | -0.48 | -0.41 | 0.02 | 0.02 |
| SIDES-SR Systems of Meaning | 4.48 (2.67) | 3.19 (2.67) | 1.9 (2.14) | 1.62 (1.78) | -2.57 | -0.96 | -2.86 | -1.07 |
| Potential Change Mechanisms | | | | | | | | |
| Self-Compassion Scale Total | 3.10 (.24) | 3.18 (.78) | 3.25 (.67) | 3.28 (.74) | 0.14 | 0.60 | 0.17 | 0.72 |
| MAIA Noticing | 2.79 (1.28) | 3.00 (1.33) | 3.21 (.88) | 3.14 (1.09) | 0.43 | 0.33 | 0.36 | 0.28 |
| MAIA Not-Distracting | 1.68 (.73) | 2.20 (1.37) | 2.73 (1.30) | 1.94 (.97) | 1.05 | 1.45 | 0.27* | 0.37 |
| MAIA Not-Worrying | 2.72 (1.18) | 2.58 (1.15) | 2.43 (.56) | 3.05 (.75) | -0.29 | -0.25 | 0.32† | 0.27 |
| MAIA Attention Regulation | 2.26 (.98) | 2.61 (.98) | 2.96 (.91) | 2.82 (1.09) | 0.69 | 0.71 | 0.56 | 0.57 |
| MAIA Emotional Awareness | 3.32 (.93) | 3.49 (1.21) | 3.66 (.84) | 3.57 (.89) | 0.34 | 0.37 | 0.26 | 0.28 |
| MAIA Self-Regulation | 2.54 (.92) | 2.72 (1.17) | 2.89 (1.04) | 3.26 (1.01) | 0.36 | 0.39 | 0.72 | 0.78 |
| MAIA Body Listening | 1.96 (1.11) | 2.07 (1.18) | 2.18 (1.06) | 2.65 (1.16) | 0.22 | 0.20 | 0.70 | 0.63 |
| MAIA Trusting | 2.31 (1.15) | 2.74 (1.37) | 3.16 (.96) | 3.71 (.86) | 0.85 | 0.74 | 1.40 | 1.21 |

Note: † = .10, * $p < .05$, ** $p < .01$; Pre = pre-treatment assessment, Mid = mid-treatment assessment, Pst = immediate post treatment assessment, FU = 1-month post-treatment assessment; *M* = mean, *SD* = standard deviation, *d* = effect size indicator with .2, .5, and .8 indicating small, medium, and large effect sizes.

Primary outcome

Posttraumatic stress symptoms. A significant overall time effect emerged for total CAPS severity score, with a total mean decrease of 27.56 ($p < .001$) from the pre – to post-treatment assessment, with a large effect size ($d = -2.81$), and a total mean decrease of 43.7 ($p < .001$) from pre-treatment to the 1-month follow up assessment, with a large effect size ($d = -4.46$; see [Figure 2](#)), indicating that participants demonstrated significant reductions in symptom severity on the CAPS over the study period. At 1-month follow up, 92% of participants no longer met criteria for PTSD. A significant overall time effect emerged for self-reported PTS symptoms on the DTS, with a total mean decrease of 39.84 ($p = .005$) from the pre – to post-treatment assessment with a large effect size ($d = -3.06$) and a total mean decrease of 39.7 ($p = .005$) from pre-treatment to 1-month follow up, with a large effect size ($d = -3.05$), indicating that participants demonstrated significant reductions in DTS symptom severity over the study period.

Secondary outcomes

Depressive symptoms. A significant overall time effect was observed for BDI depression symptoms, with a mean decrease of 15.8 ($p < .001$) from the pre – to post-treatment assessment, with a large effect size ($d = -1.59$) and a mean decrease of 14.9 ($p = .007$) from the baseline to the 1-month follow-up, with a large effect size ($d = -1.51$), indicating that participants demonstrated significant reductions in BDI depression symptom severity over the study period.

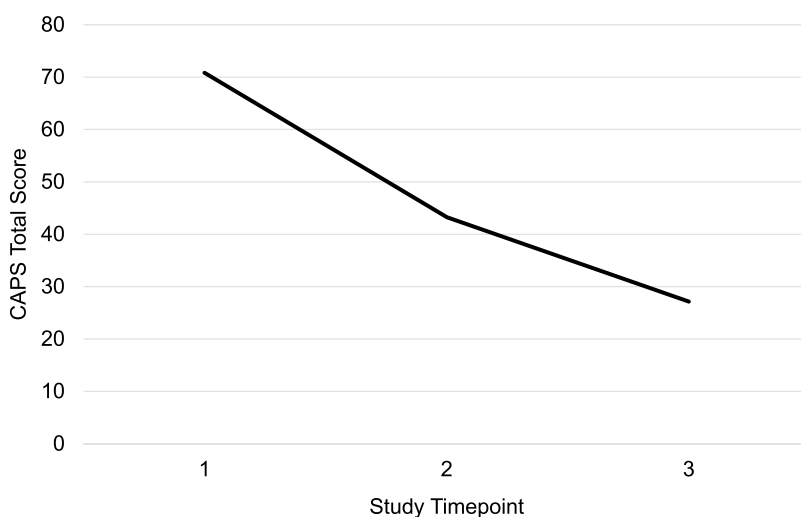


Figure 2. Change over time in posttraumatic stress symptom severity on the Clinician Administered PTSD Scale (CAPS) from study pre-treatment assessment (1), to post-treatment assessment (2) and 1-month follow up (3).

Dissociation, Somatization, Affect Dysregulation, and Self-Perception.

A significant overall time effect was also observed for self-reported symptoms on the SIDES, with a total mean decrease of 18.9 on the SIDES-SR total score ($p = .028$) from the baseline to the 1-month follow up, with a large effect size ($d = -1.27$). There were no significant time effects for the SIDES-SR subscales, but large effect sizes were observed for affect dysregulation ($d = -1.29$), dissociation ($d = -1.13$), disrupted self-perception ($d = -1.09$), interpersonal relationships ($d = -0.97$) and systems of meaning ($d = -1.07$). Findings for somatization were not significant.

Self-compassion. There was no significant time effect for total self-compassion, however a medium effect size was observed in the expected direction ($d = .72$).

Interoceptive Awareness. A significant overall time effect was observed for the Not-Distracting scale, with a total mean increase of 1.45 ($p = .021$) from the baseline to the 1-month follow up, with a small effect size ($d = 0.37$), indicating that scores increased across the study period. There was no significant time effect for any of the other subscales, but a large effect size was observed on Trusting ($d = -1.29$), and medium effect sizes on Attention Regulation, Self-Regulation and Body Listening ($d = 0.57, 0.78, \text{ and } 0.63$ respectively).

Discussion

This pilot study was an exploration of the effectiveness of IFS for adult survivors of multiple types of childhood trauma presenting with PTSD. Results suggest that IFS treatment shows promise for the treatment of PTSD, symptoms of depression, dissociation, affect dysregulation, and disrupted self-perception (encompassing both feelings of guilt and shame), in line with prior research demonstrating that IFS is effective in reducing symptoms of depression (Shadick et al., 2013). Reductions in PTSD symptoms were statistically and clinically significant. Childhood trauma survivors had a moderate-to-severe degree of PTSD prior to treatment and the vast majority (over 90%) who completed treatment no longer met DSM-IV-TR criteria after 16 sessions of IFS. While these findings are preliminary due to the uncontrolled design of the study, they provide initial support for IFS as a treatment for PTSD and point to a need for future trials utilizing more robust methods, including a randomized control design.

The observed effect sizes for reductions in severity of PTSD symptoms was very large for change in both observer and self-rated symptom severity from the pre-treatment to follow-up assessment (e.g., Cohen's d of -4.46 for change on the CAPS and -3.05 for change on the DTS). These effect sizes are larger than what has been observed in the PTSD treatment literature (Cusack et al., 2016) and may be explained by several factors. From a methodological perspective, this was an open, uncontrolled trial using a within subject's design,

which likely inflated the effect size to some degree. In addition, there were several aspects of the study design and sample characteristics that may have contributed to the strong response to treatment. First, several meta-analyses have demonstrated that women may have a stronger positive response to PTSD treatments (Bisson et al., 2007; Watts et al., 2013) and the study sample was majority (76%) female. Second, participants received 16, 90-min sessions of IFS, a higher treatment dosage than is examined in the majority of PTSD treatment studies where dosage generally ranges from eight to 12, 45–60 minute sessions (Bisson et al., 2007). In addition, research examining dosage for PTSD treatments demonstrates that clients who improve at a greater rate tend to engage in more sessions and that the rate of change is equivalent in the earlier and later stages of treatment (Holmes et al., 2019). In other words, individuals showing the greatest decreases in symptoms early in treatment tend to stay in treatment longer, and benefit continues to accumulate, therefore a longer course of treatment may result in treatment gains that translate to larger effect sizes. Third, the number of trauma-focused sessions has been shown to positively predict treatment response (Haagen et al., 2015), and IFS by design encourages exploring and addressing traumatic content early and consistently in the treatment process.

In addition to examining change in clinical indicators, we also explored the feasibility of measurement and change over time of two IFS treatment targets, self-compassion and interoceptive awareness. Findings for self-compassion were not significant, although there was a moderate effect size observed, suggesting that examination of change in self-compassion in a larger treatment trial of IFS with a greater degree of statistical power may be warranted. Examination of the mean scores on the self-compassion scale at the pre-treatment assessment showed that in this sample, pre-treatment scores were comparable to college students and higher than those observed among individuals with mental health diagnoses (Neff et al., 2017). This suggests that the lack of statistically significant change in self-compassion may be due to this sample having relatively “normative” or high scores at pre-treatment. Further exploration of self-compassion as a mediator of IFS treatment response would be an informative future direction.

Finally, change on most indicators of interoceptive awareness were not significant, with the exception of a small but significant change in ability to refrain from using distraction or ignoring to cope with sensations of pain and discomfort. Ability to engage with, tolerate and regulate overwhelming sensations and arousal is compromised in PTSD, as expressed by symptoms of avoidance, numbing, and dissociation. Increasing capacity to attend to and regulate the body may lead to enhanced insight, psychological safety, and ability to engage in and benefit from trauma treatments. IFS aims to help

clients mindfully separate from their trauma-related thoughts, sensations, and emotions, in order to bolster the ability to be a compassionate witnesses to their traumatic experience without reliving or becoming overwhelmed by it.

Clinical implications

The findings from this pilot study of IFS indicate that this alternative approach to the treatment of PTSD, which posits that traumatic sequelae such as PTSD, depression, dissociation, etc., are manifestations of protective sub-personalities (i.e., Parts), rather than pathological psychological processes, may be an effective, novel approach for individuals with a history of multiple childhood trauma. In particular, IFS is a comprehensive model of treatment, addressing all dimensions of the traumatic experience, including distorted thoughts and memories, traumatic affect, and physical sensations, from a mindful and compassionate perspective. IFS focuses on overwhelming affect and symptoms directly and early in treatment, minimizing the need for grounding strategies, resourcing or safety stabilization techniques. It is experiential in nature, requiring minimal psychoeducation, and may be experienced as more tolerable by clients who have difficulty engaging in treatments were repeated exposure to traumatic memories is a central feature. Clients with presenting issues such as dissociation, posttraumatic stress, and depression, or a combination of these features, and those displaying high levels of internal conflict, may be especially well suited for the IFS approach because it is relationally oriented, non-shaming and non-pathologizing in nature. The IFS model may be more approachable for clinicians with a psychodynamic, attachment focused, or client-centered training background. Gaining proficiency in the model requires enrollment in IFS training modules that includes level-1 (basic training), level-2 (specialty topics) and level – 3 (advanced training). The IFS approach is not recommended for clients who have traumatic brain injury (TBI), those in unsafe living environments (e.g., current domestic violence for example), or clients who are unable to attend to their internal experience to any degree.

Study limitations

The generalizability of the study findings is limited by a number of methodological factors: (1) the uncontrolled design – all participants received IFS treatment, there was no comparison group, and randomization was not used; (2) the small sample size limited the statistical power available to detect significant change, however, examination of effect sizes was also used in order

to provide an additional source of information that is less affected by low power; (3) due to the timeframe during which this study occurred, DSM IV-TR instead of DSM 5, measures of PTSD were used and substantial changes made to criteria of PTSD from the DSM IV to the DSM 5 versions (including addition of a dissociative subtype of PTSD) are particularly relevant for IFS treatment applications; and (4) the sample was relatively homogeneous in regards to racial, ethnic, and socioeconomic backgrounds.

Future directions

Future research on IFS should utilize current measures assessing DSM 5 criteria for PTSD (including dissociation), recruit participants from varying racial, ethnic and socioeconomic backgrounds, and from additional populations impacted by trauma (i.e. veterans, survivors of domestic violence) in order to expand the generalizability of findings. Limitations of this research could be further addressed through randomized control trials, starting with comparing IFS to a “treatment-as-usual” or waitlist condition, in order to determine if IFS demonstrates superior results to a comparison group and what refinements of IFS are needed to best meet the needs of trauma-impacted populations. For example, while this study examined the utility of 16 IFS sessions, with 12 sessions being the benchmark for treatment completion, future research examining dosage needed to achieve meaningful clinical change would be informative to practitioners using the model. Future research on IFS could then progress to trials comparing IFS to a gold standard treatment for PTSD (PE or CPT) or a treatment that purports to target similar mechanisms (i.e. self-compassion) such as Compassion Focused Therapy (CFT; Gilbert, 2009) or Acceptance and Commitment Therapy (ACT; Hayes et al., 2012). A third step would involve examination of the specific components of IFS (i.e. mindfully focusing on thoughts, feelings and physical sensations with self-compassion) that may contribute to symptom improvement, by using a dismantling approach for example. Finally, examination of treatment moderators (i.e. physiological indicators of treatment response), and mediators (i.e. enhanced self-compassion and interoceptive awareness) would further inform the processes at work in IFS.

Conclusion

Results provide preliminary support for IFS as a promising practice for the treatment of PTSD and symptoms and clinical problems often associated with PTSD, including depression and associated features of PTSD, among adults

with a history of childhood trauma. IFS may provide an alternative to interventions utilizing cognitive and exposure-based methods, in that it utilizes a comprehensive, mindful, and compassion-based approach to the treatment of traumatic sequelae. Future research expanding the evidence base for IFS through comparison to other active treatments and exploration of treatment moderators and mediators is needed.

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Disclosure statement

Richard Schwartz is the developer of the IFS therapy model and a senior trainer and consultant. Frank Anderson is a senior trainer and consultant in the IFS therapy model.

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Data sharing statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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