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THE EFFICACY OF INTERNAL FAMILY SYSTEMS THERAPY IN THE TREATMENT OF DEPRESSION AMONG FEMALE COLLEGE STUDENTS: A PILOT STUDY

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*College women are vulnerable to depression due to developmental and transitional life changes. Early diagnosis and effective treatment is critically important. Empirical support exists for the effectiveness of select treatment options (i.e., antidepressant medication, cognitive-behavioral therapy [CBT], and interpersonal psychotherapy [IPT]), yet a significant percentage of those treated do not benefit. In this pilot study, Internal Family Systems (IFS) therapy was tested as an alternative approach. College women (*N *= 37) were randomly allocated to IFS treatment or treatment as usual (CBT or IPT). Results demonstrated a decline in depressive symptoms for both conditions and no significant differences in the magnitude or rate of change. The results provide preliminary evidence for the efficacy of IFS in the treatment of depressive symptoms.*

Depression is a common mental health disorder that globally affects more than 350 million people (World Health Organization, 2012). Women are up to 70% more likely than men to experience depression during their lifetime (National Institute of Mental Health [NIMH], 2014). Projections for 2017 suggest depression will be one of the highest ranking global burdens of disease (Centers for Disease Control and Prevention [CDC], 2010), resulting in costs over $43.7 billion per year in the United States alone (Cassano & Fava, 2002). Significant distress, high morbidity and mortality, and significant impairment in psychological, social, and occupational functioning are typically associated with this disorder (NIMH, 2014).

The college years appear to be a peak period for depressive symptoms, particularly for the onset of initial episodes (Ibrahim, Kelly, Adams, & Glazebrook, 2013). University students experience rates of depressive symptoms that are substantially higher than those found in the general population; in fact, it is estimated that nearly a third of students are affected, with female students being most at risk (Ibrahim et al., 2013). There is also growing concern regarding the chronic nature of depression for these young adults; untreated depressive episodes typically last 6–8 months, and each untreated episode increases the likelihood of a future reoccurrence (Gelenberg, 2010).

Although the current standard of treatment, which consists of either an evidence-based form of psychotherapy (e.g., cognitive-behavioral [CBT] or an interpersonal therapy [IPT]), pharmacotherapy, or some combination, is generally efficacious in treating depressive

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symptoms, these treatment modalities are not effective for a significant percentage of individuals. As such, it is important to empirically evaluate the effectiveness of other approaches for the treatment of depressive symptoms. Internal Family Systems (IFS) therapy may be one such promising treatment, however, only one known study has examined its effects. Shadick et al. (2013) conducted a randomized control trial with patients with rheumatoid arthritis, demonstrated feasibility, and found that desirable impacts on depressive symptoms, self-compassion, and joint pain were sustained 1 year later. Subsequently, IFS was identified as an evidence-based promising practice for several conditions, including depression (Substance Abuse and Mental Health Services Administration, 2015). The purpose of this study was to further examine the utility of IFS in treating depression among a population of female college students.

LITERATURE REVIEW

While college is often an exciting time, it can introduce significant stressors, which can precipitate the onset or recurrence of depressive symptoms (Blanco et al., 2008). Stress may result from a variety of factors, including changes in sleeping and eating behaviors, financial constraints, or academic, social, or family relationship challenges (National Institute of Mental Health, 2014; Ross, Niebling, & Heckert, 1999). Additionally, emerging adulthood literature has identified this period of time as being one of identity exploration, instability, focus on self, and feeling "in-between" adolescence and adulthood (Arnett, 2004, p. 14). While identity exploration is a meaningful time for many emerging adults, these self-explorations are not always experienced positively and may result in disappointment, hardship, or rejection (Arnett, 2000).

College women are especially vulnerable to depressive symptoms due to gender-related factors as well as developmental and transitional life changes specific to this period of life. Women's higher rates of depression, compared to men's, have been linked to biological factors (e.g., changes in gonadal hormones; DeRose, Wright, & Brooks-Gunn, 2006), social factors (e.g., higher rates of childhood adversity and of physical and sexual abuse; Daley, Hammen, & Rao, 2000; Weiss, Longhurst, & Mazure, 1999), and psychosocial factors (e.g., greater tendencies to ruminate and a greater number of interpersonal stressors (Essau, Lewinsohn, Seeley, & Sasagawa, 2010; Nolen-Hoeksema, 2000; Shih, Eberhart, Hammen, & Brennan, 2006). For college women in particular, a lack of social support, low self-esteem, questioning their competence and significance, and negative life events are associated with depressive symptoms (Dixon & Robinson Kurpius, 2008; Peden, Hall, Rayens, & Beebe, 2000). Stress associated with the transition from home to university life contributes to the rising incidence of depressive symptoms for women; women utilize close interpersonal relationships to assist them in making life transitions, and without established relationships in their new environments, diminished self-esteem and depressive symptomatology may ensue (Beeber, 1999).

Depression can be disabling, and at this stage of life, it can lead to an accumulation of negative consequences as the young women enter adulthood, including impacts on educational and career prospects, relationships, and mental health. Female college students who struggle with depressive symptoms often disengage socially and academically or may engage in substance use or other high-risk activities in efforts to temporarily soothe their distress (Kindaichi & Mebane, 2011). Such disengagement and participation in health-risk behaviors can lead to reduced academic performance (Eisenberg, Golberstein, & Hunt, 2009; Hysenbegasi, Hass, & Rowland, 2005), relationship instability (Whitton & Whisman, 2010), and poorer work performance (Harvey et al., 2011). At its most extreme, depression can also lead to suicidal ideation and/or attempts (CDC, 2010).

Current Treatment Options

According to the American Psychiatric Association (APA, 2010), treatment of depressive symptoms should aim to achieve full remission of symptoms, which reduces the risk of reoccurrence. The use of antidepressant medications (also known as pharmacotherapy), cognitive-behavioral therapy (CBT), interpersonal psychotherapy (IPT), or some combination has been found effective in treating depression (American Association for Marriage and Family Therapy,

2014; CDC, 2013; NIMH, 2014). Antidepressant medications are frequently recommended as an initial treatment choice for clients with depression (American Psychiatric Association, 2010; Dimidjian et al., 2006). DeRubeis et al. (2005) compared pharmacotherapy to cognitive therapy in treating moderate to severe depression and found at 8 weeks, participants had higher response rates to medications (50%) than cognitive therapy (43%); however, at 16 weeks, both treatment options had equivalent response rates (58%). Pharmacotherapy, however, may have limited benefit in cases involving complicated grief, significant psychosocial stressors, intrapsychic conflict, interpersonal difficulties, or a co-occurring axis II disorder (American Psychiatric Association, 2010; Cuijpers et al., 2011). Additionally, antidepressant medications are not universally effective nor are they a uniformly acceptable approach (Manber, Allen, & Morris, 2002). For those that try antidepressant medications, the effectiveness is largely dependent on strict adherence to one's treatment plan. Stopping treatment abruptly or missing doses can cause withdrawal-like symptoms or a sudden worsening of depressive symptoms, which places individuals at heightened risk (Mayo Clinic, 2015).

The efficacy of CBT in treating depression has been well documented (Butler, Chapman, Forman, & Beck, 2006; Hollon, Thase, & Markowitz, 2002; Tolin, 2010). This treatment focuses primarily on challenging irrational beliefs to change clients' maladaptive preconceptions and behaviors, leading to a reduction in depressive symptoms (American Psychiatric Association, 2010; Beck, 1967). Although CBT is often recognized as a first-line treatment, many studies compared CBT to no treatment (Holmes, 2002) or found CBT to be comparable (not superior) to that of other forms of psychotherapy, such as IPT (Cuijpers et al., 2011; Hofmann, Asnaani, Vonk, Sawyer, & Fang, 2012; Tolin, 2010). Notwithstanding support for CBT, some have questioned whether challenging negative emotions is sufficient and have offered approaches that include mindfulness techniques in combination, such that clients learn to notice and redirect thoughts and emotions (e.g., Teasdale et al., 2000).

IPT is another well-documented, empirically based psychotherapeutic intervention for depression (Klerman, Weissman, & Rounsaville, 1984; Markowitz & Weissman, 2004). IPT is designed to focus on the client's current interpersonal relations while addressing one of four primary areas of concern: grief, role transitions, role disputes, and interpersonal deficits (Kindaichi & Mebane, 2011; Markowitz & Weissman, 2004). The goal of this modality is to intervene by considering significant life changes that may precipitate depressive symptoms and addressing the current trigger of the depressive episode. Evidence of IPT suggests moderate to large effects, and in some cases, larger effects than CBT, yet some research suggests less efficacy when compared to selective serotonin reuptake inhibitors (Cuijpers et al., 2011). Furthermore, because IPT is generally considered a life-event-based treatment, clients without clearly defined triggers or recognized interpersonal difficulties may derive fewer benefits (Markowitz & Weissman, 2004).

Beyond pharmacology, CBT, and IPT alone, studies have suggested that treatment which includes both pharmacotherapy and psychotherapy may be most advantageous for depressed clients (Baghai et al., 2011). A review of several meta-analyses conducted by Hofmann et al. (2012) noted support for CBT combined with pharmacotherapy, as it has been found to be more effective than CBT alone. Combined therapy may be more acceptable to clients and results in fewer clients dropping out of therapy, leading to a higher chance of a full recovery (Jonghe, Kool, Van Aalst, Dekker, & Peen, 2001).

Although these established forms of treatment of depressive symptoms are somewhat efficacious, they are not effective for all cases. Approximately 40% of people do not benefit from these forms of treatment (CDC, 2010). Furthermore, of the approximately 60% of clients who do benefit, only about 30–40% show full remission of their symptoms (Dunlop et al., 2012). When clients do not achieve full remission, they are significantly more vulnerable to reoccurrences of the disorder (Nierenberg et al., 2010). Given these limitations, alternative therapeutic modalities should be evaluated. Support for the development of alternative therapeutic approaches to treat depressive symptoms has been noted across the literature (e.g., Kessler et al., 2001). New modalities may improve goodness of fit, may be better tolerated, and may be more accepted by certain populations (Baghai et al., 2011). The identification of additional effective treatment approaches expands individuals' options for selecting – and combining – treatments that they are most comfortable with and confident in. Furthermore, given the

various factors associated with depression, certain modalities may be more ideally suited than others for resolving particular contributing factors to depression.

Internal Family Systems as a Promising Treatment Modality

Internal Family Systems (IFS) therapy is a rapidly emerging therapeutic modality, developed by Richard Schwartz (1995), that helps clients mindfully and compassionately understand and attend to the internal experiences and behaviors related to symptoms, such as those characterized by depression (see IFS bibliography at www.selfleadership.org/ifs-bibliography.html). In intuitive and nonpathologizing model, IFS posits that persons contain an ecology of "parts" of themselves that each has valuable qualities and roles and ideally work together in a harmonious manner. Through painful life experiences, such as transitions, loss, rejection, or traumatic events, these parts may be forced to adopt more constrained or rigid roles that are potentially unhealthy or maladaptive, but are intended to help the person manage difficult emotions and buffer against future painful events. As a result, a person's inner ecology of parts may become imbalanced and a person may subsequently develop unwanted symptoms.

In addition to these parts, IFS also maintains that everyone at their core possesses a self, containing leadership qualities, such as confidence, compassion, and calm, and the capacity to bring healing to burdened or constrained parts. Through IFS therapeutic practices, the resources of the self are accessed so clients can compassionately understand their parts, releasing them from constrained positions and returning them to their original healthy roles, thereby alleviating problematic symptoms. The goal of IFS is to help clients achieve self-leadership, wherein they compassionately relate to both their own and other's parts, and develop effective methods for releasing the constraints of parts that may be producing unwanted feelings or behaviors.

IFS has been theorized as a plausible option for treating depression due to the powerful force of self-leadership in regaining internal balance (Green, 2008). Martin (2014) posits that "IFS allows for an understanding of depression that views symptoms as natural reactions by the individual's parts to protect the overall system" (p. 15), as opposed to pathology. While other psychotherapy models, such as CBT and IPT, focus on changing and/or eliminating unwanted thoughts, feelings, and behaviors, Schwartz (2013) proposes that a lack of acceptance is a primary obstacle to change. Rather, IFS actively recruits self-compassion and curiosity in understanding the protective and well-intended purpose of parts carrying extreme or constrained feelings or roles. Next, clients learn to mindfully separate from these parts, thereby accessing the healing qualities of self to engage in an inner inquiry with these parts. Through this process, clients often access memories of painful events, such as traumas, attachment injuries, loss, or rejection, and achieve a sense of peace and healing related to these events. As a result, parts are able to return to their natural roles, and problematic symptoms are resolved, often permanently.

Because college women may be particularly vulnerable to heightened instability during this time of physical, developmental, and emotional change and transition (Arnett, 2000), IFS can provide an opportunity for young women to address the parts of themselves that may hold stress, shame, or feelings of worthlessness; feelings that are often contributors of depression. These feelings have been linked to the challenges that many college women face with respect to low self-esteem, a lack of social support, and not feeling competent or worthy (Dixon & Robinson Kurpius, 2008; Peden et al., 2000). Furthermore, IFS may be more suited to address contributing factors to depression that may be less effectively addressed by other treatment modalities, including trauma, adverse childhood experiences, and relational injuries or loss (Schwartz, 1995). Because IFS empowers clients to understand themselves and others with more compassion and confidence and to recognize their inherent capacities for effectively managing difficult emotions, beliefs, and behaviors, clients may be better prepared to avoid future recurrences of depressive symptoms (Schwartz, 1995).

The current study is the first to examine the utility of IFS in treating depression among a population of female college students. We hypothesized that IFS would yield equal or superior benefits to treatment as usual (TAU) (i.e., CBT and IPT). Findings have clinical implications and guide future research in determining for whom different treatments are most effective.

METHOD

Participants

Participants were recruited from a university-based counseling center at a major state university in the western United States if they met the following criteria: (a) identified as female; (b) were between the ages of 18 and 27; and (c) scored between 14 and 63 on the Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996) indicating mild-to-severe depressive symptoms. All potential participants were seeking individual therapy at the counseling center and as part of the typical intake procedures, clients were asked to complete the BDI. Clients meeting the initial eligibility criteria were then informed of the opportunity to participate in the study by a trained intake worker. Forty initially eligible participants were invited to a 1-hr informational and comprehensive screening interview. This interview was scheduled within 72 hr of the first screening and conducted by a trained research associate and marriage and family therapy graduate student. During this interview, the Structured Clinical Interview-I for DSM-IV-R (SCID I; First, Spitzer, Gibbon, & Williams, 2002) was administered to further assess depressive symptom severity and potential for exclusion criteria. In all cases, depression scores on the SCID were consistent with the BDI. Exclusionary criteria included diagnoses of bipolar or psychiatric disorders, current symptoms of posttraumatic stress disorder, eating disorders, substance use disorders, prior attempt of suicide, current persistent and serious thoughts of suicide, or an intention or plan to attempt suicide. These criteria were chosen to ensure that each participant met the condition under study (i.e., depressive symptoms) and that no other disorder or symptoms would confound the interpretation of results. Three participants were excluded from the study after completion of the interview (i.e., one participant could not participate due to scheduling difficulties, and two participants were excluded due to evidence of exclusionary criteria).

As the Consolidated Standards of Reporting Trials (CONSORT) diagram in Figure 1 shows, the remaining 37 participants were randomly assigned in blocks of participants to one of two treatment conditions (IFS or TAU). Random assignment at the individual level was not feasible because of logistical challenges (i.e., two of the IFS therapists were traveling 2 hr to meet clients). Therefore, four blocks of six participants were randomized first and a final block of four and three participants to IFS and TAU, respectively, were assigned to accommodate the final seven participants without leaving the groups unbalanced. Five participants were lost during follow-up. The final sample included 32 female university students (17 in the IFS condition and 15 in the TAU condition), ranging in age from 18 to 27 yr (M = 20.42, SD = 2.58). The majority (n = 26) identified as Caucasian/non-Hispanic, two as American Indian/Hispanic, one as Asian American/Pacific Islander, one as Caucasian/Hispanic, and one as African American/Hispanic. One participant did not disclose her racial or ethnic identity. Most of the participants (n = 27) were enrolled as undergraduate students. Four were enrolled as graduate students and one did not disclose. More than half (68.8%) were single, 18.8% were dating, 9.4% were in a committed relationship or living together, and 1 chose not to disclose her relationship status. No participants reported having children.

Study Procedures

The study protocol was approved by the University Institutional Review Board, and informed consent was obtained. Participants completed a baseline interview, subsequent weekly and by-session assessments, and a posttest survey, as outlined in the measurement section. Two possible treatment conditions were included in the study: the IFS treatment condition and TAU. Each therapy session, regardless of condition, was provided free of charge to the client and included one 50-min session per week for 16 weeks. Therapy sessions were provided by therapists who met the following inclusion criteria: (a) at least a Master's degree in a therapy field; and (b) proficiency in therapeutic modality used for the study.

TAU condition. In the TAU condition, all therapists worked at the university-based counseling center. Therapists followed their preferred model of therapy (i.e., CBT and/or IPT) for their client. Eleven therapists (one male, 10 female) provided therapy for participants in this condition. Three of these therapists were licensed psychologists with doctoral degrees and more than 30 yr of

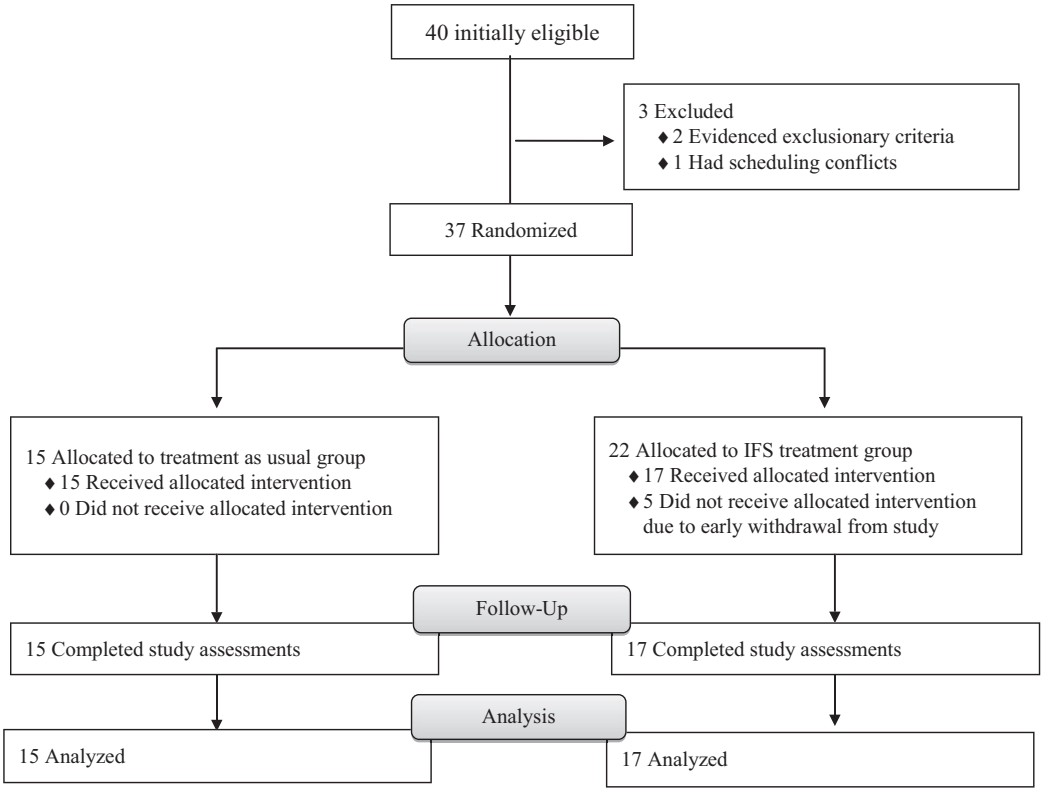

Figure 1. Consolidated standards of reporting trials (CONSORT) diagram.

postdegree clinical experience. The remaining eight therapists were supervised interns working toward a doctorate degree in psychology with 1–2 yr of post-Master's clinical experience.

IFS treatment condition. The IFS treatment followed the protocol detailed in Schwartz (1995) (this protocol has been updated; see www.selfleadership.com). The treatment process evolves through seven steps that occur in a cyclical manner. The therapist is allowed to repeat or return to prior steps as necessary, or to begin the cycle of steps again as a new issue is identified. The steps are as follows: (a) introducing the model; (b) getting to know the client's internal and external contexts; (c) entering the client's internal ecology of parts; (d) depolarizing parts and differentiating self; (e) identifying constraints impinging on an individual part; (f) releasing constraints affecting an individual part; and (g) harmonizing the internal ecology of parts.

Because no therapists at the university-based counseling center were proficient with the IFS treatment modality, community therapists trained in IFS were recruited to provide therapy in this condition. Only five qualified therapists (n = 5) were available to participate in the study. All five therapists were female and had Master's or doctoral-level degrees—three in marriage and family therapy, one in transpersonal counseling psychology, and one in clinical psychology. Two of the therapists had less than 1 yr of postdegree clinical experience and three had between 5 and 7 yr of postdegree clinical experience. All of the therapists had completed the Level 1 basic training in IFS. One therapist had 4 yr of experience with IFS; the remaining therapists had less than 1 yr of experience with the model. During the study, each therapist received regular supervision via telephone from one of the lead trainers in IFS.

Treatment Uptake and Fidelity

IFS treatment group. Of the 22 participants who were randomized to the IFS treatment group, 13 completed 16 sessions, two completed 11 sessions, two completed five sessions, and five simultaneously discontinued treatment and withdrew from the study. Of those five, one participant moved from the area, one did not experience a good fit with the therapist, one did not like IFS, one

did not provide a reason, and one was hospitalized for severe suicidal ideation. IFS therapy sessions in this condition were audiotaped so that treatment compliance could be measured. An outside observer assessed randomly selected sessions to determine compliance with the IFS model. Because the IFS Adherence Scale (available through the Center for Self-Leadership) had not been developed at the time of this study, an observer rating sheet was developed for the purpose of this study. It contained information on a 4-point Likert scale regarding the overall assessment of the therapist's use of the IFS model, quality of the implementation, and use of IFS techniques. A total of 28 sessions were assessed. All but one session the observed sessions scored between 3.3 and 4.0 on the compliance rating sheet, indicating high levels of compliance to the IFS model (range = 2.6–4.0). The session that was scored at 2.6 included a significant amount of time in which the therapist was simply listening, thereby providing little opportunity to demonstrate the IFS model.

Treatment as usual group. Five participants completed 16 sessions, five completed between 11 and 15 sessions, and five completed between 8 and 10 sessions. No participants in this condition discontinued therapy or withdrew from the study. Therapy sessions were not audiotaped due to an administrative decision by the director of the university-based counseling center. To determine the model of therapy utilized, therapists completed the Comparative Psychotherapy Process Scale (CPPS; Hilsenroth, Blagys, Ackerman, Bonge, & Blais, 2005) after each session. The CPPS is an instrument designed to assess therapist activity, process, and techniques used in a psychotherapy session. The CPPS was derived from empirical studies comparing psychodynamic-interpersonal and cognitive-behavioral approaches. A sample item is as follows: addressed the patient's avoidance of important topics and shifts in mood. Response choices range from 0 = not at all characteristic to 6 = extremely characteristic. Scores on the psychodynamic-interpersonal subscale ranged from 1.40 to 4.60 (M = 2.99, SD = .85) and scores on the cognitive-behavioral subscale ranged from 1.10 to 3.60 (M = 2.09, SD = .67). Results of the CPPS indicated that six clients primarily received cognitive-behavioral therapy, two clients primarily received psychodynamic-interpersonal therapy, and seven received a combination of both cognitive-behavioral and psychodynamic-interpersonal approaches.

Measures

Demographic information was collected at the first session. Self-report was utilized to gather information on age, ethnicity, year in school, relationship status, and number of children.

Beck depression inventory (BDI). The BDI was completed prior to each session. The BDI is a widely used 21-item, self-report rating inventory that reliably measures characteristic attitudes and symptoms of depression (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). There is a four-point scale (0–3) for all but two items for which there are seven options to indicate change in appetite and sleep. Typical thresholds of total scores indicate that a score of 0–13 is considered minimal range, 14–19 is mild, 20–28 is moderate, and 29–63 is severe. The BDI has high concurrent validity with other depression instruments (Beck, Steer, & Garbin, 1988), and internal consistency in the current sample was high (α = .80).

Revised helping alliance questionnaire (HAq-II). Participants also reported on their perception of therapeutic alliance via the 19-item Revised HAq-II (Luborsky et al., 1996). The HAq-II was completed at the third session and, on average, every four sessions after the initial report. Each item is rated on a 6-point scale (1 = *I strongly feel it is not true*, 6 = *I strongly feel it is true*). Negatively worded items were reverse coded so that higher scores indicate stronger therapeutic alliance. An example item is as follows: I feel the therapist understands me. The HAq-II demonstrated good convergent validity with related measures (Luborsky et al., 1996) and Cronbach's alpha for the current sample was .87.

Group therapy participation. Because it is common practice at the counseling center to engage clients in both individual and group therapy, it was determined by the IRB that no restrictions should be placed on participation in group therapy during this study. To track this, participants reported whether they had participated in group therapy during the previous week. Five participants in the TAU condition participated in group therapy during the study. No participants in the IFS condition participated in group therapy.

Antidepressant medication use. Similarly, the IRB determined that no restrictions would be placed on the use of antidepressant medication by the participants in either condition. To account for medication use, changes in antidepressant use were tracked each week. Participants reported if they had commenced or discontinued use in the past week. Participants also reported any changes to the type or dose of medication. Medication use in the IFS condition was as follows: two participants were on medication for more than 1 year prior to the study, three people started medication 2–3 months prior to the study, and one person started medication a week before the study. One of the two participants on medication for more than a year discontinued use during the study. Medication use in the TAU condition was as follows: one participant was on medication for more than a year prior to the study, two participants started a week before the study, five started between week 2 and week 8 of the study, and one person started on week 9. None of these participants discontinued their use.

Data Analysis

Two approaches to the assessment of treatment effects were used. First, a series of growth curve models were fit to the data to examine intraindividual change in depressive symptoms over the course of the study. These models were fit using a multilevel framework (i.e., measurement occasions nested in person) using Mplus, version 6 (Muthén & Muthén, 2010). All available data were used, even if an individual was missing on one or more measurement occasions. The treatment condition indicator was specified as a predictor of the growth parameters to assess treatment effects. Second, a set of ordinary least squares regression models were estimated. In these models, depressive symptoms at sessions 6, 11, and 16 were regressed on depressive symptoms at Session 1 and the treatment condition indicator to assess treatment effects at each measurement occasion while adjusting for baseline depressive symptoms.

RESULTS

Baseline Characteristics by Group

Participants in the IFS and TAU conditions did not differ significantly from one another on age, ethnicity, year in school, relationship status, and number of children. Table 1 also shows relatively similar scores between groups on antidepressant medication use, therapeutic alliance, and baseline depression scores. The comparison group did report higher rates of participation in group therapy. Due to insufficient sample size, however, there was not enough power to statistically control for this group difference in subsequent data analyses.[1]

Table 1
Baseline Scores on Key Variables

	Treatment group		Comparison group		
	M	*SD*	*M*	*SD*	*t*-test/chi-square test
Therapeutic alliance (beginning)	4.16	.41	4.12	.52	.27
Therapeutic alliance (end)	4.38	.38	4.37	.44	.09
BDI baseline	29.06	8.31	30.33	8.47	−.43
	Yes	No	Yes	No	
Antidepressant medication use	4	13	4	11	.04
Group therapy participation	0	17	5	10	6.72*

Notes. *$p < .05$. Therapeutic Alliance (beginning) includes the first report of therapeutic alliance at session 3. Therapeutic Alliance (end) includes the final report of therapeutic alliance. BDI = Beck Depression Inventory-II.

Effect of IFS on Depression

Effects of the IFS therapy (compared to the TAU therapy) on depression were examined through two models. In the first, change in depressive symptoms was modeled as a quadratic growth model, allowing change in depressive symptoms to be modeled with an intercept (depressive symptoms at session 1), a slope (initial change in depressive symptoms after beginning the program), and a quadratic term (acceleration or deceleration in depressive symptoms over the course of the study). These growth parameters were then regressed on the treatment condition indicator. The effect of IFS on the growth parameters were nonsignificant for the slope (b = .91, SE = .69) and for the quadratic term (b = −.04, SE = .05), indicating that there were no significant differences in the initial rate of change in depressive symptoms or acceleration/deceleration in depressive symptoms across the treatment conditions. Figure 2 presents the model implied average growth curves by condition. In both conditions, a decline in depressive symptoms is apparent. By recentering the intercept of the growth model, the effect of treatment condition on depressive symptoms at various stages of the program may be assessed. The estimates reported in Table 2 present these effects for Session 6, Session 11, and Session 16. At all three time points, there were no significant differences in depressive symptoms between IFS and TAU.

Model B presents the results of ordinary least squares regression models in which depressive symptoms at sessions 6, 11 and 16 were regressed on depressive symptoms at Session 1 and the treatment condition. Congruent with the growth models, no significant differences between IFS and TAU are apparent.

DISCUSSION

This is the first known study to evaluate the efficacy of IFS in treating depressive symptoms among female college students, and only the second known study to test IFS as a treatment modality for any mental health condition. IFS treatment was compared to treatment as usual (TAU), which consisted of CBT or IPT. Results demonstrate a decline in depressive symptoms for both conditions and no significant differences in the magnitude or rate of change between IFS and TAU. Such results are promising because the treatment outcomes of IFS were compared to the "gold standard" treatments—CBT and IPT. Presumably, comparing IFS to a no-treatment control condition may result in statistically significant treatment impacts. Consistent with Shadick et al.'s (2013) study, the results of this study indicate that IFS may be a promising treatment modality for depression, which should be subjected to additional tests of treatment efficacy and effectiveness.

Key constraints to the study design may have resulted in no statistically significant difference being found between treatments. First, no restrictions were placed on clients from participating in group therapy or using antidepressant medications in conjunction with individual therapy during

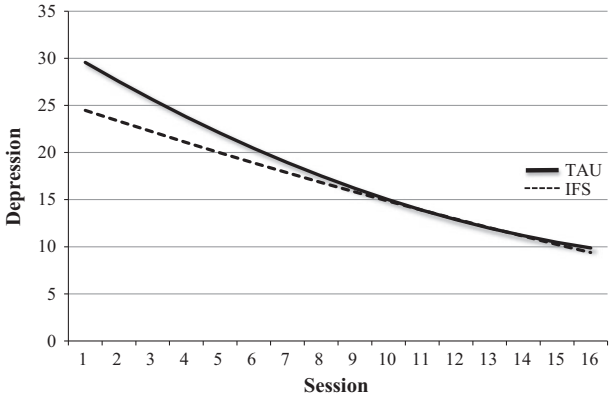

Figure 2. Depressive symptoms over time by treatment group (model implied growth estimates). TAU, treatment as usual; IFS, Internal Family Systems.

Table 2
Effect of Internal Family Systems (Compared to Treatment as Usual) on Depression

	Model A		Model B	
Time	*Est*	*SE*	*Est*	*SE*
Session 6	−1.55	3.19	−1.40	3.32
Session 11	−.03	3.09	3.85	3.22
Session 16	−.51	2.92	−.84	3.64

Notes. Model A: conditional growth model (test of centered intercept); Model B: ordinary least squares regression controlling for Session 1 Score. No differences are statistically significant.

the study, and the small sample size resulted in insufficient power to control for these variables during analyses of treatment effects. Presumably, the effects of the TAU condition were strengthened by the relatively frequent addition of antidepressant medication and/or group therapy to the individual therapy. Specifically, 53% of participants in the TAU condition and .06% of participants in the IFS condition started antidepressant medication immediately before or during the course of therapy. No participants in the TAU condition discontinued medication, whereas one participant in the IFS condition did so. Additionally, 33% of participants in the TAU condition and no participants in the IFS condition participated in group therapy.

Additional constraints were related to the levels of clinical experience of therapists in the study. Therapists in the TAU condition possessed more years of clinical experience than those in the IFS condition. Additionally, several therapists in the IFS condition were fairly inexperienced with the IFS model. In fact, four of the five IFS therapists had less than 1 year of experience practicing IFS. Presumably, stronger results in the IFS treatment condition would have been achieved if more seasoned IFS therapists had been available to provide therapy for this study.

It is critical that alternative treatment options for depression continue to be identified and tested. For college women, effective alternatives are sorely needed as this period of life is marked by instability, change, and transition. Alternative treatments are also important for those who do not respond to or prefer these modalities (Baghai et al., 2011). The results of this study have implications for practitioners in prescribing treatments to clients and for clients in having increased agency in determining what treatments they are most comfortable with. With all approaches to treatment, challenges may appear. For example, in the current study, five clients left the IFS condition for various reasons, including one person who stated that she did not like the IFS treatment and one who did not experience a good fit with the therapist. Although speculative, this higher rate of drop out in the IFS treatment condition may be related to the relative inexperience of IFS therapists. Even when theory and empirical work support an approach, what occurs within the bounds of the therapy room is largely dependent on expectations and interactions of therapists and clients (Greenberg, Constantino, & Bruce, 2006).

Strengths and Limitations

In addition to the constraints described above, other limitations to the study need to be considered in interpreting findings. The small convenience sample recruited for the pilot study limits statistical power to detect an effect if it exists and enhances risk for selection bias. Although larger sample sizes are preferred in most statistical analyses, the current study meets general minimum criteria to suggest adequate power without the inclusion of control variables. First, growth models with sample sizes as small as $n = 22$ have been successfully fitted in previous research (Huttenlocher, Haight, Bryk, Seltzer, & Lyons, 1991). Second, critical to model estimation and power is the total number of person-by-time observations (Muthén & Curran, 1997). Minimum guidelines suggest at least three observations, which we exceed in this study. Future studies, however, should

seek larger sample sizes to adequately account for bias and extraneous variables. Because multiple observations were included, there is risk for practice effects. Participants completed the BDI, for instance, prior to each session. In weighing the risk of practice effects against the need for statistical power in this pilot, the risk was determined worth it.

Another limitation was that individual random assignment was not feasible. Although steps were taken to limit bias, including random assignment in small groups, groups may differ by characteristics that were not assessed. Differences in the dropout rates by group also possess a limitation of our results. More participants in the IFS group discontinued treatment and dropped out of the study than in the TAU group. As a result of not having data for these participants at follow-up, our results are biased to those who completed treatment and not those randomized to treatment. Therapists' levels of commitment or allegiance to the type of therapy provided were not measured. Additionally, therapy sessions in the IFS condition, but not in the TAU condition, were audiorecorded as a means of measuring fidelity. Although some research indicates audiotaping may negatively influence the therapy process (e.g., Gossman & Miller, 2012), most studies have found there is no effect (e.g., Hill et al., 1994; Shepherd, Salkovskis, & Morris, 2009). Finally, the generalizability of findings is limited; the majority of participants were Caucasian and single, and all were seeking mental health services and therefore were ostensibly aware of their depressive symptoms and motivated to change.

Despite these limitations, the study possesses many strengths. This is one of the first studies to test IFS as a treatment modality for any mental health condition, and it examines the treatment of depressive symptoms among a high-risk and vulnerable population. The study utilized a rigorous design, in which IFS was compared against the "gold standard" treatment. Although individual random assignment could not be utilized, randomization of small groups to condition minimized the chance of group differences. The study used established measures and incorporated fidelity assessments of treatment compliance.

Conclusion and Directions for Future Research

This study provides a significant contribution to what is known about the utility of IFS and treating depressive symptoms in college women. In addition to CBT and IPT options, IFS may be another promising choice, although future research is needed. Future research should continue to investigate the effectiveness of IFS as well as other treatment options for depressive symptoms and to begin to work toward specifying the conditions under which certain treatments work and for whom they are most effective in treating. For example, particular treatments are more appropriate for certain developmental stages than others (e.g., psychiatric medications are less appropriate for very young clients). Further, consideration of the developmental context of clients is essential in selecting appropriate modalities. As college women are at an age of defining themselves as individuals, a treatment option that promotes acceptance and decreases the stress associated with this self-exploration process is ideal. Future research also should determine whether treatment effects of certain therapeutic modalities are sustained over time; for instance, research should test the premise that IFS therapy results in permanent shifts in the internal system, which should result in reduced rates of re-occurrence of depressive symptoms. If treatment of depression is to result in eliminating risk for reoccurrence and lifetime duration of the disorder, it is critical to prioritize the development and evaluation of treatment modalities that improve patient outcomes and decrease the economic burdens related to unsuccessful treatment.

NOTE

[1]While the sample size was too small to legitimately control for any group differences at baseline, we did run a model in which we attempted to control for several factors. In this model, the use of depression medication, involvement in group therapy, and therapeutic alliance were controlled. The effect of IFS on the growth parameters remained nonsignificant for the slope (b = .91, SE = .73) and for the quadratic term (b = −.04, SE = .05). Given the small sample size, however, these results do not include sufficient power to know if the factors were actually controlled for.

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