Cognitive vs. Supportive Therapy for Distressed Collegians

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COGNITIVE VS. SUPPORTIVE THERAPY FOR DISTRESSED COLLEGIANS

by

Jean Clore

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
Degree of Doctor of Philosophy
Department of Psychology

Western Michigan University
Kalamazoo, Michigan
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Rates of depressive symptoms, psychological distress, and low self-esteem appear to be growing on college campuses. Determining how best to help distressed collegians is an important public health concern, as these individuals appear to be at significant risk for further deterioration, disrupted quality of life, and impaired ability to succeed in college. This study compared the effects of (a) six sessions of cognitive therapy (CT; training in two cognitive modification strategies - building positive self-thoughts and disputing negative self-thoughts) to (b) six sessions of non-directive, supportive therapy (ST). Fifty-three students from a large mid-western university reporting low self-esteem and significant levels of distress were randomly assigned to six 1-hour, weekly therapy sessions of either CT or ST. Measures of distress, depression, self-esteem, and positive and negative self-thoughts were taken at pre-, mid-, and post-treatment and at 1-and 3-month follow-up. Results indicated that while improvements were seen in both conditions by post-treatment, CT produced quicker, larger results. These results provide evidence for building fluency with positive self-thoughts, a relatively new cognitive technique, and have important implications for a population that may especially benefit from active, brief treatments.
ACKNOWLEDGMENTS

I would like to begin by expressing my sincerest gratitude to my advisor, Dr. Scott Gaynor, for all of his enthusiasm, patience, hard work, and amazing ability to shape students’ behavior. I would also like to thank the members of my graduate committee, Dr. Galen Alessi, Dr. Amy Naugle, and Dr. Elaine Phillips, for their suggestions during the generation of this project and for taking the time to review my work. I would also like to acknowledge Dr. Richard Malott and Dr. Jack Michael for turning me on to radical behaviorism at such an impressionable, young age. My family and fiancé also deserve much appreciation for their continued support of my academic pursuits over the past several years. Lastly, I would like to acknowledge my grandmother, Louise O’Dell, for her inspiration, grace, and love.

Jean Clore
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INTRODUCTION

Depression and low self-esteem are significant and growing problems on college campuses (Voelker, 2003). According to the National College Health Assessment survey, 14.9% of students reported receiving a diagnosis of depression in 2004, as compared to 10.3% in 2000 (cf. Hoover, 2004). Recent data from Western Michigan University indicate that 35.3% of students reported experiences during the last school year where they felt so depressed that it was difficult to function, with an additional 4.8% reporting this experience 11 or more times. Eight percent reported significant suicidal ideation. In a student survey at a major research university, a state university, a community college, and a private liberal arts college, 53% (55%, 59%, 44% ad 46%, respectively) of those surveyed reported experiencing depression since beginning college, with 9% indicating they had considered suicide (Furr, Westefield, McConnell, & Jenkins, 2001).

Campus counselors are reporting similar increases. A study tracking problems across 13 years at a campus counseling center, found increased rates in 14 of 19 problem areas. During the most recent time period assessed (1996 – 2001) the most common presenting problems included: stress/anxiety (63%), relationship problems (56%), and depression (41%), which increased 73%, 21%, and 93% respectively, indicating that the number of depression cases seen had nearly doubled from the first assessment period (1988-1992; Benton, Robertson, Tseng, Newton, & Benton, 2003). Chandler and Gallagher (1996) found relationship difficulties (69%), self-esteem (60%), and depression (45%) to be the most frequent presenting problems. While there are clearly varying degrees of severity, and not all students in the above studies would meet DSM-
IV criteria, even sub-threshold symptoms are associated with functional impairment and place the student at risk for further deterioration (Fergusson et al., 2005; Lewinsohn et al., 2000; Rivas-Vazquez et al., 2004).

Low self-esteem (i.e., negative self-evaluation) is theoretically and empirically associated with a range of psychological disorders (e.g., eating disorders, social anxiety), but has been particularly connected with depression. Central to cognitive theory of depression is the notion that depressed individuals have a negative view of the self, world, and future (Beck et al., 1979). As Fennell (2004, p. 1058) summarizes: “Beck’s cognitive model identifies negative self-schemas and negative thoughts about the self as central to the development and maintenance of depression.” The negative self-view is theorized to result from maladaptive schemata (i.e., core beliefs, dysfunctional assumptions) that distort subsequent information processing. These schemata are inferred from clinical observations of the client’s automatic negative thoughts disclosed verbally in session or on self-report measures. Empirical findings support a significant link between automatic negative thoughts (negative self-statements) and depression (Hollon & Kendall, 1980) and low self-esteem and depression (Osman et al., 1997; Roberts, Gotlib, & Kassel, 1996; Smith & Betz, 2002). Whether negative self-evaluation is regarded as a risk factor, correlate, component, or consequence, it has been routinely associated with depressive symptoms.
Treating Depression and Low Self-Esteem with Cognitive Behavior Therapy (CBT)

*CBT and Modification of Negative Self-Thoughts*

CBT, based on Beck’s model, has repeatedly proven to be an efficacious treatment for depression, with outcomes equaling or exceeding those of medication and other psychotherapies (Chambless et al., 1998; DeRubeis et al., 1999; DeRubeis et al., 2005; Dobson, 1989), and has been advocated for use in improving self-esteem (see McKay & Fanning, 2000). Most recently, DeRubeis et al. (2005) conducted a 2-site, placebo-controlled, randomized trial to compare the effects of antidepressants and CBT in moderate to severe depression. Two hundred forty outpatients ($M$ age = 40) were randomly assigned to sixteen weeks of either: (a) pharmacotherapy (paroxetine or placebo) in which they received weekly treatment sessions focused on medication management and brief supportive counseling for the first four weeks and every other week thereafter or (b) CBT as outlined in standard manuals of cognitive therapy for depression (i.e., Beck et al., 1979). At mid-treatment (8 weeks), response rates (as indicated by a score of 12 or lower on the Hamilton Depression Rating Scale) in the antidepressant (50%) and CBT (43%) conditions were both superior to the placebo (25%) condition. After the initial eight weeks, the double-blind condition was broken and participants who had been given the placebo were offered treatment. At post-treatment, response rates in each of the active treatments were 58%. The authors concluded that CBT can be as effective as medications in treating moderate to severe depression, with the caveat that effectiveness may depend on a high level of therapist expertise.

A continuation of this study (Hollon et al., 2005) was designed to determine if CBT has an enduring effect and to compare it with the effect produced by continued
antidepressant medication. Responders to CBT were allowed up to three booster sessions during the 12-months following the acute phase while medication responders were randomly assigned to either continued medication or placebo withdrawal. Patients who had received CBT during the acute phase were no more likely to relapse than patients who continued medication (30.8% vs. 47.2%), and were significantly less likely to relapse during continuation than patients withdrawn from medications (76.2%). Thus, CBT has an enduring effect beyond the end of treatment, preventing relapse, and appears to be as effective as keeping patients on antidepressants.

Cognitive behavior therapy (CBT) is typically delivered as a multi-component package, comprised of both cognitive (e.g., restructuring) and behavioral (e.g., activity scheduling) strategies, delivered over 12 – 20 sessions, making evaluation of the specific techniques difficult. The necessary and sufficient ingredients for change in CBT remain uncertain (Jacobson et al., 1996; Tang & DeRubies, 1999; Whisman, 1993). Beck and others (DeRubeis & Feeley, 1990; Hollon, 2000) hypothesize that the cognitive components are primarily responsible for CBT’s efficacy. Thus, negative thoughts, which are considered both fluent (i.e., automatic negative thoughts) and inaccurate (i.e., cognitive distortions), are the primary target for change in CBT for depression (Persons, Davidson, & Tompkins,) and low self-esteem (McKay & Fanning, 2000).

Training clients to observe, record, and restructure negative thoughts is often done with the use of the Thought Record (Beck et al., 1979; 2001Persons et al., 2001). The Thought Record guides the client through the process of identifying negative thoughts, examining evidence for and against the negative thought, exploring possible alternative explanations, and finally, substituting a more accurate, realistic, or less extreme thought.
Thus, the Thought Record can be seen as one of the most thorough negative self-thought modification techniques (see Dowd, 2004). Indeed, CBT patients do typically show improvement on measures of dysfunctional attitudes and automatic thoughts. However, because cognitive restructuring is only one component of the full treatment, it remains unclear whether the cognitive techniques are necessary to produce these, and the other symptomatic, changes (see Jacobson et al., 1996).

**CBT and Building Positive Self-Thoughts**

As noted above, most cognitive strategies, such as the Thought Record, emphasize disputation of negative thoughts and generating incompatible or more adaptive self-statements; however, the focus is not typically on explicitly increasing positive self-statements (Lange et al., 1997). There have been two notable exceptions in which rehearsal of positive self-thoughts has been used to alleviate depressive symptoms. Philpot and Bamburg (1996) randomly assigned college students reporting low self-esteem to either a control condition or to a condition in which participants were instructed to rehearse a list of 15 self-statements (comprised of both restructured negative thoughts and positive thoughts) three times daily for two weeks. Significantly greater improvement in self-esteem and depression was reported in the rehearsal condition. Lange and colleagues (1998) evaluated the efficacy of solely positive self-instruction. College students with low self-esteem were randomly assigned to positive self-instruction training or a neutral task control condition. The intervention involved generating a list of positive personal characteristics, writing an essay incorporating them (session 1), and reducing the essay to a list of positive self-statements (session 2), which over the next three weeks was
to be read twice daily. Compared to controls, the intervention group reported significant improvement in self-esteem.

Interestingly, a related, but parallel, approach has been developing in the field of precision teaching, where Calkin (1981, 1992, 2000, 2002) has advocated applying fluency building strategies to self-thoughts. Precision teaching involves identifying and counting a target behavior and then, through short (e.g., 1-minute), repeated timed practices, increasing the rate of that behavior until “fluency” is established. A classic example is Lindsley’s SAFMEDS (say all fast a minute each day shuffled) method with flashcards. A performance is said to be fluent when the target behavior is not only accurate but also occurs at a high rate (i.e., is fast, automatic, or second-nature; see Binder, 1996; Lindsley, 1996).

Calkin (1992) reported data from 35 people using fluency training to increase positive self-thoughts and improve self-esteem. After a baseline during which positive and negative self-thoughts were self-monitored, participants were asked to write as many positive self-thoughts as they could during 1-minute timings once per day. These positive thoughts could be ones they identified about themselves or things that others had said about them. This intervention resulted in participants, on average, doubling their number of self-positives and reporting subjective increases in self-esteem. Also of note, the data indicated that an increase in positive thoughts did not necessarily result in a decrease in negative thoughts (Calkin, 1992).

While the findings of Philpot and Bamburg (1996), Lange and colleagues (1997; 1998) and Calkin (1981, 1992) are promising, the available data are limited. These limitations include: a number of case studies (Calkin, 1981; Lange et al., 1998), samples
of convenience completing the intervention as part of a class assignment in the absence of
an appropriate control or comparison condition (Calkin, 1992), lack of an active
treatment comparison group (Lange et al., 1998; Philpot & Bamburg, 1996), absence of
commonly used clinical measures (Calkin, 1992; Lange et al., 1998), lack of
documentation of mastery of positive self-thoughts (Lange et al., 1998; Philpot &
Bamburg, 1996), and the absence of follow-up data, leaving the maintenance of effects
unknown (Calkin, 1992; Lange et al., 1998; Philpot & Bamburg, 1996).

In prior work (Clore & Gaynor, 2006), thirty undergraduates with significantly
elevated scores on the Rosenberg Self-Esteem Scale and Brief Symptom Inventory were
randomly assigned to one of two cognitive therapy conditions: (a) Thought Record
training (TR) or (b) Fluency Training (FT). TR training focused on teaching participants
to identify and challenge negative thoughts while FT focused on improving the
automaticity of positive self-thoughts. Participants in both conditions received three
weekly therapy sessions. The first session lasted two hours: the first to cover the consent
form, screening, rapport building, and pre-treatment assessment measures and the second
to begin intervention. The second and third sessions each lasted one hour and focused
completely on the relevant intervention. A post-treatment assessment was conducted one
week following the last session, and a follow-up was conducted at least one month later.
Results revealed statistically significant improvements in global distress, depressive
symptoms, self-esteem, and negative and positive thinking in both groups, with the
majority (over 60%) experiencing clinically significant improvements. There were no
significant differences between TR and FT, indicating that the interventions were equally
efficacious. Follow-up data indicated that treatment gains were maintained.
Treating Depression and Low Self-Esteem on College Campuses

Many distressed college students do not seek professional help, but when they do, brief therapy appears the most common treatment offered on campus. As Benton et al. (2003, p. 70) note, “although the number of students with serious problems… increased, the focus of the counseling service was on limiting student counseling sessions to 10 or fewer.” Indeed, the mean number of sessions at the counseling center in their study was 6. A national survey found 73% of campus counseling centers averaged 3-6 sessions per client (Stone et al., 2000). However brief the contact may be, it is useful for many clients. In Furr et al.’s (2001) sample, while only 17% of those who reported experiencing depression sought treatment, 68% of those who did indicated it was helpful. The most common reasons were having someone to talk to, being helped to explore new options or ideas, and developing new ways to look at things. Interestingly, the first reason is the essence of supportive therapy and the second and third summarizes the thrust of cognitive therapy.

CBT is typically delivered over the course of 12 – 20 sessions, a duration that is significantly longer than 3-6 sessions college students typically receive. However, there has been some evidence that briefer CBT has been effective. Wood et al. (1996) found 6 sessions of CBT to be superior to relaxation training for adolescents. In a review of adult CBT studies, Ilardi and Craighead (1994) noted that 60-80% of the decrease in depressive symptoms occurred during the first four weeks (8 sessions). These data suggest significant symptom reduction can be obtained in abbreviated CBT; but it is not clear that the effects are due to CBT specific skills. In fact, the early improvement has been interpreted in terms of non-specific factors (i.e., providing a credible rationale with
associated techniques and homework; Ilardi & Craighead, 1994). Others suggest these effects are due to the cognitive techniques (Tang & DeRubeis, 1999), and that cognitive therapy (CT) skills are critical for preventing relapse (Hollon et al., 2005), or decreasing suicidal thinking (TADS, 2004).

In our previous study with a distressed college sample, 3-session CT interventions were rated as sensible and acceptable and associated with clinically significant improvements in distress, depressive symptoms, suicidal ideation, and self-esteem (Clore & Gaynor, 2006). These data suggest that cognitive techniques may be sufficient for producing change and set the stage for comparing their efficacy to a supportive therapy condition, the aim of the present study. In this study the Fluency Training and Thought Record treatments from our previous study were combined to form a six-session CT intervention, which was compared with six sessions of Supportive Therapy.

METHOD

Methodological Details

Participants and Recruitment Procedures

Undergraduate students over the age of 18 reporting significant distress and feelings of low self-esteem were recruited from Western Michigan University, a large mid-western university of approximately 25,000 students. Flyers were posted around campus and class announcements were made advertising the opportunity to participate in the study.
After signing the consent form, participants were screened using the Brief Symptom Inventory (BSI) and the Rosenberg Self-Esteem Scale (RSES). Those taking medication for psychiatric reasons were allowed to participate if they had been on the medication for at least eight weeks. Individuals who were receiving other psychological treatment were excluded. As well, individuals endorsing strong current suicidal ideation at pretreatment (reporting “thoughts of ending your life” as causing them “quite a bit” or “extreme” distress on the BSI) were excluded from the study in favor of a referral for individualized services tailored to their immediate needs. Individuals scoring one standard deviation above the mean according to the adult non-patient norms on the Brief Symptom Inventory (BSI) and one standard deviation below the mean for a college population on the RSES were included and randomly assigned (stratified by gender) to one of two therapy conditions: either Cognitive Therapy (CT) or Supportive Therapy (ST).

Both the CT ($n = 21$) and ST ($n = 18$) groups were primarily female (67%) and Caucasian (77%). The mean age of participants in the CT group was 22 years ($SD = 5.24$) and 21 years ($SD = 2.88$) in the ST group. The CT group had slightly more sophomores (35%) while the ST group consisted of more seniors (33%). However, no statistically significant differences were found with respect to grade level, $x^2(4, N = 38) = 3.72, p = .45$. Ninety-five percent of the sample were full-time students and 67% were employed at least part-time. The mean cumulative grade point averages on a 4.0 scale were CT = 3.30 ($SD = .56$) and ST = 3.30 ($SD = .37$), suggesting that on average participants were doing well in school. Fifty-one percent of the sample had a history of mental health treatment ranging from brief counseling as a child to hospitalization. Table 1 provides a group
comparison of demographic characteristics. Analyses using Pearson’s chi-square and Fisher’s exact tests did not detect statistically significant group differences on any of these variables ($p$ range = .15 to .72).

Table 1. Sample Demographic Variables

<table>
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<tr>
<th>Variable</th>
<th>CT ($n = 21$)</th>
<th>ST ($n = 18$)</th>
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<tr>
<td>Gender (Female)</td>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>67</td>
<td>67</td>
</tr>
<tr>
<td>Full-time student</td>
<td>20</td>
<td>17</td>
</tr>
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<td></td>
<td>95</td>
<td>95</td>
</tr>
<tr>
<td>History of mental health treatment</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>48</td>
<td>56</td>
</tr>
<tr>
<td>Currently taking psychotropic medication</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>17</td>
</tr>
<tr>
<td>Uses alcohol</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>67</td>
<td>47</td>
</tr>
<tr>
<td>History of substance abuse treatment</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Uses tobacco</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>6</td>
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*Therapists*

Five graduate student therapists delivered the two treatments in this study. All had prior didactic and clinical training relevant to the treatment approaches used in the study, and four with at least one year of clinical experience working with clients. Additionally, prior to conducting the treatments, therapists received therapy specific training. FT therapist training involved reading and discussing Calkin’s (2000) “A Minute a Day Makes Good Feelings Grow,” an article describing her application of fluency training (precision teaching) to self-positives from which our FT protocol borrowed heavily. Therapists also completed an online precision teaching module and tutorial (developed by David Polson and available through a website maintained by Athabasca University). TR therapist training involved reading and discussing Persons et al.’s (2001) chapter entitled “Using the Thought Record” from *Essential Components of Cognitive-Behavior Therapy*
for Depression and watching and discussing two Thought Record instructional videos (i.e., APA, 2000 [therapist Jacqueline Persons]; New Harbinger Publications, 1996 [therapist Chrisine Padesky]) on which the TR protocol was based.

ST therapist training involved reading and discussing Greenberg et al.’s (1998) chapter “What the Therapist Does: Experiential Response Intentions and Modes,” a partial transcript of Carl Rogers conducting an initial session, presented in Corsini and Wedding (2005), and watching and discussing Carl Rogers classic interview with “Gloria” (i.e., Psychological & Educational Films, 1981). After the therapy specific trainings described above, therapists practiced role-playing with the author using the protocols established for this study. Additionally, the author viewed the therapists’ first videotapes and provided feedback. Group supervision was held regularly over the course of the study with Dr. Gaynor and the therapists. Therapists were assigned an equal number of participants in each arm of the study, and followed each assigned participant throughout the study.

Setting

All sessions took place in therapy rooms located in the psychology department at Western Michigan University. The therapy rooms were well lit, had at least one table and two chairs, and a mounted wall camera. Sessions were conducted individually.

Treatment Conditions

Participants who met inclusion criteria and agreed to participate were stratified by gender and then randomly assigned to either the cognitive therapy condition (CT) or supportive therapy condition (ST), both of which consisted of six weekly treatment
sessions and five assessment sessions (pre-treatment, mid-treatment, post-treatment, 1- and 3-month follow-ups). Assessment sessions required approximately 30-45 minutes. Participants who dropped out were invited to complete assessments even if they had discontinued treatment. The first meeting in both conditions was used to cover the consent form, screening, rapport building, and pre-treatment assessment measures. Pre-treatment assessment measures, to which the researcher/therapists were blind, included eight brief questionnaires and a self-thought fluency assessment (STFA; Clore & Gaynor, 2006) procedure which involves two (one for positive and one for negative) separate 3-minute periods, including two minutes to silently generate self-thoughts and one minute to write as many as possible. In the following four assessment sessions (mid-treatment, post-treatment, and the two follow-ups) the participants were again asked to complete the brief questionnaires and STFA. The weekly therapy sessions for both conditions each lasted one hour and focused completely on the relevant intervention described below.

CT Condition

Participants received three sessions of fluency training (FT) followed by three sessions of thought record training (TR). FT emphasized how thinking differently, like any skill, requires dedicated practice and focused on improving the automaticity of positive self-thoughts by increasing both their overall number and the rate at which they can be identified (Calkin, 1992; 2002; Clore & Gaynor, 2006). FT began with participants writing his/her current positive self-thoughts (from the self-thought fluency assessment) on index cards. On the opposite side of the card a “clue/trigger” (e.g., a situation, life domain, person, or activity) that might occasion that thought was identified. The participant then read the set of cards to him/herself focusing on committing them to
memory followed by flashcard drills conducted with the therapist until the client could say the self-positives aloud, without the cards. When the set could be articulated without omissions or hesitation during three timed mastery trials, performance was deemed “fluent” and the participant’s list expanded (e.g., if the original list consisted of five self-positives, five more were added, and so on). This strategy yielded individualized, cumulative fluency training aims. As self-thoughts were identified, care was taken to ensure that they were not Pollyanna-ish, but had some referent in the client’s life experience, which s/he could articulate. For homework, participants were encouraged to carry their cards and practice as often as possible, shuffling between practices, and were assigned three practices per day. They were also asked to keep a log of 1-minute daily drills in which they wrote as many positive self-thoughts as they could.

TR training focused on teaching participants to identify and challenge negative thoughts using the 7-column Thought Record, as demonstrated by Padesky (New Harbinger Publications, 1996) and consistent with the approach outlined by Persons et al. (2001). The Thought Record was used to introduce the cognitive model and to teach the participant to identify negative automatic thoughts, the situations in which they occur, the associated emotions, the evidence for and against them, and, finally, to generate more balanced, and adaptive thoughts. For homework participants were encouraged to challenge all negative thoughts, but to formally record three per day. The psychoeducational component used in both cognitive modification strategies emphasized the impact of thoughts on behavior and emotions and the importance of practicing new ways of thinking allowing for an easy integration of FT and TR for this study -- the
former as a strategy for increasing positive thinking about the self and the latter as a way to respond to negative thoughts.

**ST Condition**

The focus in the ST condition (based on Greenberg et al., 1998) was on the exploration of feelings; helping the client to become aware of and talk about his/her emotional experience with no attempt to change thoughts, behaviors, or the client’s experiences directly. Psychoeducation emphasized the untoward effects of not acknowledging or exploring feelings and that by identifying and talking about feelings one can come to better understand him/herself and to develop her/his own solutions to problems. The therapist’s goal was to establish *empathic attunement*, an understanding of the world from the client’s perspective. Primary therapist behaviors included: asking open-ended questions, reflective listening, communicating interest and empathy, and asking questions seeking clarification of the clients’ experience. Therapists were instructed not give advice, offer solutions, make interpretations, provide expert reassurance, or disagree with/confront the client. Outside of session the client was asked to do “awareness homework,” which involved monitoring the presence, intensity, and duration of emotions with no prescription to change them or do anything differently. In sum, both treatment conditions, while distinctly different in their focus and content, involved equal therapist contact and provision of a sensible treatment rationale with a set of associated techniques. The table in Appendix A provides a session-by-session comparison of the two treatment conditions, and Appendix B contains detailed treatment protocols and corresponding homework forms.
Measures

A variety of commonly used clinical self-report measures were employed. The Rosenberg Self-Esteem Scale (RSES), Brief Symptom Inventory (BSI), and Beck Depression Inventory-II (BDI) were used as the primary dependent variables to assess changes in self-esteem, general distress, and depressive symptoms. The Automatic Thoughts Questionnaire (ATQ), Automatic Thoughts Questionnaire-Positive (ATQ-P), Action and Acceptance Questionnaire (AAQ), Self-Thought Fluency Assessment (STFA) and Working Alliance Inventory (WAI) were used as secondary dependent variables to further measure specific treatment effects. The STFA also provided an in vivo behavioral sample of positive and negative self-thoughts. With the exception of the demographic questionnaire, the pretreatment BSI and RSES, which were used as part of determining eligibility, and the pretreatment STFA statements, which were used in the first treatment session, the therapists were kept blind to the assessment data. In addition to normative data from the literature, data from a local non-distressed sample are presented when available. This later set of data was collected in a pilot study in which undergraduate participants, \( N = 58 \), 57% female, \( M \) age = 22 (4.2), were screened on the RSES and the BSI and then asked to complete the STFA, the AAQ and the ATQ.

*Primary Dependent Measures*

The primary dependent measures were administered at pre-, mid- and post-treatment, and at 1- and 3-follow-up assessment sessions. The BSI and RSES were also used as screening measures.

1.) Brief Symptom Inventory (Derogatis, 1993). The BSI is a 53-item questionnaire designed to reflect psychological symptom patterns. Items are endorsed on a scale
of 0 (not at all) to 4 (extremely), and higher scores indicate higher rates of general distress. Participants who endorsed item 9 (“Thoughts of ending your life”) as a 3 or 4 and those with a raw score less than one standard deviation above the mean for the adult non-patient normative sample (0.49 for males and 0.72 for females) were excluded from this study. The mean for the local, non-distressed sample was 0.22 ($SD = 0.14$).

2.) Rosenberg Self-Esteem Scale (Rosenberg, 1989). The 10-item RSES asks participants to rate their level of agreement, ranging from 0-40, with statements describing general feelings about themselves. Higher scores indicate a more positive self-evaluation with a mean of 32.60 ($SD = 5.25$) established in a large non-patient college sample (Vispoel et al., 2001). The RSES served as a screening questionnaire to include anyone scoring one standard deviation or lower from the mean (27 or lower). The mean for the local, non-distressed sample was 31.55 ($SD = 5.49$).

3.) Beck Depression Inventory-II (Beck et al., 1996). The BDI is a widely used 21-item self-report scale assesses the severity of depressive symptoms. The normative mean, from a large collegiate sample, was reported to be 9.11 ($SD = 7.57$) with recommended descriptors of 0-13 minimal depression, 14-19 mild depression, 20-28 moderate depression, and 29-63 severe depression (Dozois et al., 1998).
Secondary Dependent Measures

The secondary dependent measures were also administered at pre-, mid- and post-treatment, and at 1- and 3-follow-up assessment sessions, and were included in this study to detect potential treatment-specific effects.

1.) Automatic Thoughts Questionnaire (Hollon & Kendall, 1980). The 30-item ATQ measures the frequency of negative self-statements. Each item is scored on a 5-point scale, ranging from 1 (not at all) to 5 (all the time), with higher scores indicative of more negativity. Non-patients score between 40-60, while depressed patients tend to score over 90. The mean for normative samples, provided by Dozois et al. (2003), is 52.91 (SD = 18.18). The local, non-distressed sample mean was 41.22 (SD = 9.79).

2.) Automatic Thoughts Questionnaire-Positive (Ingram & Wisnicki, 1988). The 30-item ATQ-P measures the frequency of positive self-statements and is scored from 1 (not at all) to 5 (all the time), with higher scores indicating more positivity. As reported by Ingram and Wisnicki (1988), the mean score for non-depressed individuals is 107 (SD = 19), 96 (SD = 19) for mildly depressed, and 83 (SD = 16) for depressed individuals. However, the normative mean averaged across samples, reported by Dozois et al. (2003), is 98.61 (SD = 13.02).

3.) Self-thought Fluency Assessment (STFA Ratio; Clore & Gaynor, 2006). This measure involves two, separate 3-minute periods in which the individual is given two minutes to collect his/her self-thoughts, followed by one minute to write as many positive or negative as s/he can. After both lists are generated, each thought is rated for personal importance and believability on a scale from 1 (extremely
important/believable) to 5 (not at all important/believable). The primary score derived from this measure (data from the local, non-distressed sample) is the ratio of positive to negative thoughts ($M = 1.68, SD = 0.68$).

4.) Acceptance & Action Questionnaire (Hayes et al., 2004). The 9-item AAQ measures ability to take action despite uncomfortable thoughts/feelings. Each item is scored on a 1-7 scale, with higher scores indicating greater experiential avoidance and immobility. The mean for clinical populations is 38-40. For non-clinical populations it is 33.4 ($SD = 7.2$). The mean for the local, non-distressed sample was 30.47 ($SD = 5.39$).

5.) Working Alliance Inventory (Horvath & Greenberg, 1989). The 36-item WAI measures aspects of the working alliance between the client and the therapist that are considered to be common to all clinical treatments. Higher scores indicate a better working alliance. The WAI was given at mid- and post-treatment assessment sessions.

6.) Valued Living Questionnaire (Wilson, 2002). Taken from Acceptance and Commitment Therapy, this 20-item questionnaire asks the individual to first rate the importance of values in various areas of life (e.g., family, work, education, relationships), and then action taken during the last week towards those values on a scale from 1 to 10. This measure was included to assess potential corresponding overt behavior changes.

7.) Academic Performance. A brief measure to track course performance and class attendance developed by the authors for this study.
Additional Measures

The following measures were used to gather additional information about the participants and feedback regarding their participation in the study.

1.) Demographic Questionnaire. Created by authors, was administered at pre-treatment to provide information about participants age, sex, ethnicity, GPA, year in school, treatment history, etc.

2.) Impression Management subscale of the Balanced Inventory of Desirable Responding (Paulhus, 1991). This 20-item measure of social desirability was administered at pre-treatment.

3.) Post-treatment evaluation questionnaire. This 11-item questionnaire developed by the researchers asks participants to rate aspects of the treatment, the therapist, and their participation and satisfaction on a scale from 1 (not at all) to 5 (extremely).

RESULTS

Participants and Therapists

Attrition

Of the 58 qualifying participants, 39 completed the study (“completers” defined as receiving six treatment sessions and completing pre-, mid-, and post-treatment assessments). Two participants failed to initiate therapy following the pre-treatment assessment, and therefore were not assigned to either condition. There were 17 “dropouts” (a 29% attrition rate) who completed one or more therapy sessions, but failed to complete the study: eight dropped out after the first therapy session, three after the
second session, one after the third, two following the mid-treatment assessment, and three dropped out after the fourth therapy session. Attrition rates were comparable in both conditions: 9 out of the 30 assigned to CT and 8 out of the 26 assigned to the ST condition. This attrition rate is not uncommon in clinical research trials, and is nearly identical to the 30% attrition rate in our previous research with this population (Clore & Gaynor, 2006). Although not statistically significant, freshman and sophomores were somewhat more likely to complete the study (80% and 85%, respectively) than juniors (56%) and seniors (60%).

Dropouts did not differ significantly from completers on demographic variables (age, ethnicity, GPA, etc.), on the RSES, $F(1, 54) = .41, p = .53$, or on the BSI, $F(1, 54) = .00, p = .98$. Group mean differences on the BDI approached significance, $F(1, 54) = 3.23, p = .08$, with the dropouts scoring higher ($M = 26.65, SD = 7.02$) than completers ($M = 21.71, SD = 10.30$). Interestingly, consistent with their session attendance, dropouts did report missing statistically significantly more classes per week than completers, $F(1, 52) = 13.23, p = .001$.

**Therapist Effects**

Three (time) by five (therapist) ANOVAs were calculated to detect potential therapist effects on the primary dependent measures yielding no significant time x therapist interactions among treatment completers. However, a chi-square analysis revealed a statistically significant difference in number of completers and dropouts across therapists, $\chi^2(4, N = 56) = 17.06, p = .002$. Table 2 presents the number of assigned participants, number of dropouts, and percentage of completers for each therapist, which makes clear that the vast majority of the dropouts (13/17) were seen by therapists 3 and 4.
This appears to represent a clear therapist effect, indexed by treatment discontinuation, among the intent-to-treat sample.

Table 2. Therapist Percentages of Completers and Dropouts

<table>
<thead>
<tr>
<th>Therapist</th>
<th>Participants</th>
<th>Dropouts</th>
<th>% Completers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<tr>
<td>5</td>
<td>4</td>
<td>1</td>
<td>75</td>
</tr>
</tbody>
</table>

Agreement and Adherence to Treatment Protocols

Following each session, therapists completed a treatment adherence questionnaire, which included three subscales: general therapy, CT-specific, and ST-specific. The general therapy items addressed issues such as providing a clear rationale, establishing an attentive and engaging therapeutic relationship, Socratic questioning, and assigning homework. The other two subscales focused on the technique specific to one of the two conditions. For example, CT-specific items asked about the use of cognitive modification techniques (either fluency or thought record training), in-session skills practice, and collaboration. ST-specific items asked about allowing the client to guide the agenda, focus on the participant’s emotions, reflective listening, as well as behaviors the therapist should not be doing in ST (e.g., assuming an expert/didactic role). Thus, the ST-specific items were divided into those that should be occurring frequently (ST-consistent) and those that should not be occurring (ST-inconsistent).

An independent, trained, doctoral student in clinical psychology observed 25% of the treatment session videotapes and also completed the treatment adherence forms.

Videotapes were quasi-randomly selected from the intent-to-treat sample (completers +
dropouts) to ensure an even distribution across treatment conditions, therapists, sessions, and participants. Based on therapists’ and coder’s ratings, there were no significant treatment adherence differences between completers and dropouts. In other words, therapists demonstrated equal adherence to the treatment protocols with both completers and dropouts.

The questions on the treatment adherence form used a 6-point Likert scale so first, a Pearson’s product moment correlation coefficient was calculated, which demonstrated significant inter-rater agreement between therapist and coder ($r = .88, p < .001$). A kappa coefficient was also calculated, and indicated very good rater agreement that exceeded chance levels ($K = .83, p < .001$). When calculating kappa, scores ranging from 1-3 (not at all – minimally) and scores ranging from 4-6 (considerably – extensively) were grouped together and treated as categorical.

Total treatment adherence scores and average ratings were calculated for the general therapy, CT-, and ST- specific subscales. Scores of 4 and above (considerably) were considered to represent adherence to that particular therapy protocol. Average treatment adherence ratings from the therapist and coder on the general therapy subscale are presented in Figure A. In the CT condition, the average treatment adherence rating on the general therapy subscale by the therapist was 4.70 ($SD = .51$) while the average coder rating was 5.02 ($SD = .50$). In the ST condition, the average therapist rating was 5.24 ($SD = .68$) while the average coder rating was 5.26 ($SD = .64$). Overall, these data indicate strong adherence to general therapy issues, such as providing a sensible rationale, establishing an attentive and engaging therapeutic relationship, and assigning homework, in both treatment conditions. However, there was a significant interaction between the
rater and condition variables, $F(1, 47) = 5.20, p = .03$, which indicated that therapists rated themselves lower in the CT condition than in ST and lower than the coder.

![Bar chart showing general therapy treatment adherence ratings by therapists and coder.](image)

**Figure 1.** General Therapy Treatment Adherence Ratings by Therapists and Coder.

Figure B presents the average treatment adherence ratings from the therapist and coder on the CT-specific items for both conditions. In the CT condition, the average treatment adherence rating on the CT-specific subscale by the therapist was 4.46 ($SD = 1.80$) while the average coder rating was 4.39 ($SD = 1.83$). In the ST condition, the average therapist rating was 1.05 ($SD = .09$) while the average coder rating was 1.01 ($SD = .05$). Overall, these data indicate good adherence to the CT protocol and that CT was not occurring during ST. There was not a significant difference between raters, $F(1, 47) = 1.20, p = .28$, nor a significant interaction between the raters and conditions, $F(1, 47) = 0.08, p = .78$.  

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Figure 2. CT-Specific Treatment Adherence Ratings by Therapists and Coder.

Figure C presents the average treatment adherence ratings on the ST-consistent specific items. In the ST condition, the average treatment adherence rating on the ST-consistent specific subscale by the therapist was 5.42 (SD = .42) while the average coder rating was 5.57 (SD = .41). In the CT condition, the average therapist rating was 1.32 (SD = .46) while the average coder rating was 2.23 (SD = .63). Overall, these data indicate strong adherence to the ST protocol and that CT and ST were quite unique. However, there was a significant interaction between the rater and condition variables, $F(1, 47) = 28.67, p < .001$, which indicated that the coders rated the therapists higher overall and as using more ST-specific techniques in the CT condition than the therapists rated themselves.
Figure 3. ST-Consistent Specific Treatment Adherence Ratings by Therapists and Coder.

Figure D presents the average treatment adherence ratings on the ST-inconsistent specific items. In the ST condition, the average treatment adherence rating by the therapist was 1.61 ($SD = .57$) while the average coder rating was 1.49 ($SD = .42$). In the CT condition, the average therapist rating was 3.44 ($SD = 1.71$) while the average coder rating was 3.85 ($SD = 1.23$). Overall, these data indicate that active, directive therapist behaviors were not occurring during ST, as specified in the protocol. There was not a significant difference between raters, $F(1, 47) = 1.14, p = .29$. The interaction between the rater and condition variables was approaching significance, $F(1, 47) = 3.63, p = .06$.

Although these items were created to assess adherence to the ST protocol by ensuring that the therapist was not taking a directive approach, many were consistent with the directive therapist behaviors specified in the CT protocol. For example, assuming an expert/didactic role was not targeted as a CT-specific adherence item, but it would be considered in line with the CT protocol, which is why these items are rated as occurring
“minimally” in the CT condition. Thus, overall the data suggest strong adherence to the treatment protocols and indicate that the treatments provided were distinct.

![Bar chart showing ST-Inconsistent Specific Treatment Adherence Ratings by Therapists and Coder.](chart.png)

**Figure 4.** ST-Inconsistent Specific Treatment Adherence Ratings by Therapists and Coder.

**Pre-Treatment Comparisons**

Pretreatment group differences were assessed through one-way analyses of variance (ANOВAs) and are presented in Table 3. None of the assessment means significantly differed between groups at pretreatment, indicating that participants in each condition were reporting comparable levels of self-esteem, depression, distress, negative thoughts, positive thoughts, and experiential avoidance. In addition, low means were obtained on the Impression Management questionnaire indicating that participants were not likely overly concerned with how they presented to the therapist and/or heavily influenced by possible demand characters.
Table 3. Pre-Treatment Group Comparisons

<table>
<thead>
<tr>
<th>Measures</th>
<th>CT</th>
<th>ST</th>
<th>F (1, 37)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n = 21)</td>
<td>(n = 18)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BDI-II</td>
<td>22.14</td>
<td>10.54</td>
<td>21.22</td>
<td>10.29</td>
</tr>
<tr>
<td>BSI</td>
<td>1.47</td>
<td>.56</td>
<td>1.54</td>
<td>.60</td>
</tr>
<tr>
<td>RSES</td>
<td>22.52</td>
<td>2.36</td>
<td>22.22</td>
<td>3.84</td>
</tr>
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<td>AAQ</td>
<td>42.38</td>
<td>5.68</td>
<td>42.67</td>
<td>6.18</td>
</tr>
<tr>
<td>ATQ</td>
<td>85.19</td>
<td>24.60</td>
<td>80.78</td>
<td>26.08</td>
</tr>
<tr>
<td>ATQ-P</td>
<td>68.81</td>
<td>12.13</td>
<td>73.72</td>
<td>19.21</td>
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<tr>
<td>STFA Ratio +/-</td>
<td>.95</td>
<td>.25</td>
<td>.96</td>
<td>.40</td>
</tr>
</tbody>
</table>

Impression Mngt:

Acute Treatment Outcome

Acute treatment outcome analyses were conducted on the 39 completers. All of the dependent measures were given at each assessment time, and were analyzed using 2 (treatment group) x 3 (time) repeated measures ANOVAs (see Table 4), with the exception of the WAI which was given at mid- and post-treatment and analyzed using a 2 x 2 ANOVA. Additionally, we created indices of change by regressing mid-treatment scores on pre-treatment scores (Phase I) and post-treatment scores on mid-treatment scores (Phase II) to create standardized residuals for each variable. One-way ANOVAs with these scores were conducted to clarify the course of change.

Primary Dependent Measures

Both groups demonstrated statistically significant ($p < .001$) improvements in depressive symptoms (BDI), general distress (BSI), and self-esteem (RSES) over time.
However, there was a statistically significant time x treatment interaction on the BDI, $F(2, 36) = 5.06, p = .01$, with participants in the CT condition reporting a greater decrease in depressive symptoms. Similarly, the time x treatment interaction on the BSI approached significance, $F(2, 36) = 2.52, p = .095$, with the CT participants showing generally greater improvement. No significant time x treatment effect was demonstrated on the RSES, $F(2, 36) = 1.29, p = .29$.

Additional one-way ANOVAs on the residualized change scores revealed that the statistically significant time x treatment interactions resulted from pre- to mid-treatment changes. (To supplement the ANOVA results, we also present between-groups effect sizes using Cohen’s $d$ [Cohen, 1992]).\(^1\) One-way ANOVAs conducted at mid-treatment revealed statistically significant group differences on the BDI-II $F(1, 37) = 13.99, p = .001, d = 1.19$ and on the BSI $F(1, 37) = 7.48, p = .01, d = 0.88$. The RSES was not significantly different, $F(1, 37) = 0.61, p = .44, d = 0.24$. Post-treatment ANOVAs revealed that group differences converged by the end of treatment on the BDI-II $F(1, 37) = 1.43, p = .24, d = 0.38$ and BSI $F(1, 37) = 0.16, p = .69, d = 0.13$. Interestingly, the RSES $F(1, 37) = 2.60, p = .12, d = 0.52$ now began to approach significance and its effect size went from small at mid-treatment to medium at post-treatment. Thus, CT produced quicker and larger improvements; however, by the end of six sessions the advantage for CT was small to medium.

\(^1\) When calculating Cohen’s $d$, the difference between the two treatment condition group means ($M_{CT} - M_{ST}$) is divided by the pooled standard deviation. According to Cohen (1992), effect sizes of 0.20 are defined as small, 0.50 as medium, and 0.80 as large.
Secondary Dependent Measures

As expected due to the nature of the treatments, there were highly significant time x treatment effects on the STFA Ratio, $F(2, 36) = 6.06, p = .005$, indicating that the CT condition produced greater fluency with positive self-statements, $F(2, 34) = 8.78, p = .001$. Although negative thoughts on the STFA decreased significantly in both groups across time, there was not a statistically significant interaction, $F(2, 35) = .32, p = .73$. Interestingly, there was a statistically significant interaction on the ATQ, $F(2, 36) = 5.36, p = .009$, indicating that on this measure, participants in the CT condition reported a significantly greater decrease in negative thoughts. However, no interaction was demonstrated on the ATQ-P, $F(2, 36) = 1.33, p = .28$. Time x treatment effects on the AAQ approached significant levels $F(2, 36) = 2.78, p = .075$, indicating that participants in the CT condition reported slightly greater decreases in experiential avoidance. No significant interaction was found on the WAI, $F(1, 37) = 0.36, p = .55$, indicating that the working alliance did not differ between the treatment conditions.

As with the primary dependent measures, one-way ANOVAs on the residualized change scores revealed several statistically significant group differences favoring CT at mid-treatment: AAQ, $F(1, 37) = 7.56, p = .009, d = 0.88$; ATQ, $F(1, 37) = 12.22, p = .001, d = 1.12$, and STFA Ratio, $F(1, 37) = 12.55, p = .001, d = 1.14$. The ATQ-P and WAI means were not statistically significant, $F(1, 37) = 2.21, p = .15, d = 0.47$ and $F(1, 37) = 0.20, p = .66, d = 0.18$, respectively. Post-treatment ANOVAs again revealed that, with the exception of the STFA Ratio, group differences converged by the end of treatment: STFA Ratio, $F(1, 37) = 6.71, p = .014, d = 0.83$; AAQ, $F(1, 37) = 2.29, p = .14, d = 0.47$; ATQ, $F(1, 37) = 1.22, p = .28, d = 0.35$; ATQ-P, $F(1, 37) = 1.93, p = .17$, d
Despite the convergence, again, small-to-medium effect sizes favoring CT were observed in all cases except the WAI where the effect size was near zero. Thus, the secondary measures provide clear evidence of treatment specific effects on theoretically relevant variables at mid-treatment that were apparent but attenuated at post-treatment.

**Table 4. Outcome Measures as a Function of Time and Type of Treatment**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Time</th>
<th>M</th>
<th>SD</th>
<th>M</th>
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<th>F (1, 37)</th>
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<td>Post-Tx</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>14.56***</td>
<td>1.33</td>
</tr>
<tr>
<td></td>
<td>RATIO</td>
<td>CT</td>
<td>0.95</td>
<td>0.25</td>
<td>2.02</td>
<td>0.65</td>
<td>2.30</td>
</tr>
<tr>
<td></td>
<td>ST</td>
<td>0.96</td>
<td>0.40</td>
<td>1.35</td>
<td>0.62</td>
<td>1.50</td>
<td>0.64</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>28.30***</td>
<td>6.06**</td>
</tr>
<tr>
<td></td>
<td>WAI</td>
<td>CT</td>
<td>-</td>
<td>-</td>
<td>209.10</td>
<td>24.21</td>
<td>220.86</td>
</tr>
<tr>
<td></td>
<td>ST</td>
<td>-</td>
<td>-</td>
<td>212.17</td>
<td>17.16</td>
<td>220.39</td>
<td>20.91</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11.38***</td>
<td>0.36</td>
</tr>
</tbody>
</table>

*Note. CT n = 21; ST n = 18; † p < .10, * p < .05, ** p < .01, *** p < .001*

**Clinical Significance**

To supplement the comparison of the means, we calculated clinically significant change using criterion C from Jacobson & Truax (1991). According to Jacobson & Truax (1991), the least arbitrary definition of clinically significant change is when, “the level of
functioning subsequent to therapy places that client closer to the mean of the functional population than it does to the mean of the dysfunctional population (Criterion C).” This criterion is based on the relative likelihood of a given score ending up in dysfunctional versus functional population distributions. Clinically significant change (CSC) is inferred when a post-treatment score falls closer to the mean of the normal population on the variable of interest. On the BDI-II, a cutoff criterion of 10 was used, which is more restrictive than Criterion C for this measure, and has been used to distinguish depressed from non-depressed individuals in previous clinical trials research.

The percentages of participants meeting CSC criteria in each condition are presented in Table 5. Mid-treatment CSC percentages in the CT condition ranged from 38 – 86% and from 22-56% in the ST condition. At post-treatment, both ranges were slightly higher: 52-90% in CT and 39-72% in ST. Of note, the percentage meeting CSC favored CT on all seven variables at mid-treatment and six of the seven at post-treatment. Interestingly, the one variable that did not favor CT at post-treatment was the ATQ.

Table 5. Clinically Significant Change Percentages

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mid-Tx CT % n = 21</th>
<th>Mid-Tx ST % n = 18</th>
<th>Post-Tx CT % n = 21</th>
<th>Post-Tx ST % n = 18</th>
<th>1-Month CT % n = 17</th>
<th>1-Month ST % n = 14</th>
<th>3-Month CT % n = 13</th>
<th>3-Month ST % n = 13</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI-II</td>
<td>76 39</td>
<td>52 44</td>
<td>59 50</td>
<td>62 54</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BSI</td>
<td>86 56</td>
<td>76 72</td>
<td>76 64</td>
<td>85 77</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RSES</td>
<td>62 56</td>
<td>81 67</td>
<td>76 57</td>
<td>77 77</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AAQ</td>
<td>38 22</td>
<td>76 56</td>
<td>71 50</td>
<td>77 62</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATQ</td>
<td>62 33</td>
<td>57 61</td>
<td>59 64</td>
<td>77 62</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATQ-P</td>
<td>43 33</td>
<td>57 39</td>
<td>47 57</td>
<td>69 54</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STFA Ratio</td>
<td>86 50</td>
<td>90 65</td>
<td>82 64</td>
<td>69 69</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average CSC%</td>
<td>65 41</td>
<td>70 58</td>
<td>67 58</td>
<td>74 65</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Moderators

In order to investigate possible moderator effects of various demographic variables on the change seen on the dependent measures, a series of repeated measures ANOVAs were conducted with both treatment condition and demographic variables entered as fixed effects. No moderator effects were found with respect to treatment history, medication use, alcohol or tobacco use, employment, enrollment status, or GPA. However, some effects were found with respect to gender, race, and education.

Gender was not a moderator of treatment effects on the BDI as both men and women in CT reported a greater decrease in depressive symptoms than men and women in ST, $F(2, 34) = 3.37, p = .05$. However, on the BSI there was a time x gender interaction, $F(2, 34) = 3.26, p = .05$, indicating that women in both treatments reported a larger decrease in general distress than did men. Moreover, there was a time x treatment x gender interaction on the RSES, $F(2, 34) = 5.09, p = .01$, indicating that women in the CT condition reported greater improvement in self-esteem than women in the ST condition, and than did men in either condition. With respect to the secondary dependent measures, there was a time x treatment x gender interaction on the AAQ, $F(2, 34) = 4.77, p = .02$, indicating that women in the CT condition reported a larger decrease in experiential avoidance. There were no statistically significant interactions on the remaining secondary measures.

With respect to race, there was a significant time x race interaction on the BSI, $F(2, 34) = 3.35, p = .05$, indicating that Caucasian participants reported a larger decrease in general distress in both conditions at mid-treatment, but by post-treatment the BSI
means for whites (.73) and non-whites (.76) were not statistically different. Similar results were found on the ATQ, $F(2, 34) = 4.02, p = .03$; however, this significant time x race interaction was exacerbated by pre-treatment mean differences between whites (87.33) and non-whites (69.22), $F(1, 37) = 3.89, p = .06$. Lastly, there was a statistically significant time x treatment x grade level interaction on the BSI, $F(2, 33) = 3.68, p = .04$, indicating that upperclassmen (juniors and seniors) reported a greater decrease in general distress than did lower classmen (freshman and sophomores).

**Predictors of Change**

The significant group differences found were largely due to differences favoring CT at mid-treatment with the groups converging at post-treatment. Despite the “catch-up” change in ST, the CT means at post-treatment suggested continued movement in the therapeutic direction. Thus, we examined whether changes on any variables from pre- to mid-treatment (Phase I) predicted changes from mid- to post-treatment (Phase II). Using the Phase I and Phase II standardized residuals for all variables except the WAI, which was only collected at mid- and post-treatment, Pearson product moment correlations were calculated to determine if change during Phase I predicted change during Phase II and if the predictors were similar across conditions.

In the CT condition, Phase I change on the STFA Ratio predicted Phase II change on the BSI ($r = -0.52, p = .015$). This was the only predictor of Phase II change on a primary dependent variable and is consistent with the theorized pattern of change in this condition. In addition, there were several significant relationships between secondary variables. Phase I STFA Ratio change predicted Phase II change on the ATQ ($r = -0.55, p = .01$). In addition, Phase I AAQ change predicted Phase II ATQ change ($r = 0.48, p = .01$).
Phase I ATQ-P change also predicted Phase II ATQ change \((r = -0.47, p = .03)\). These data suggest that increases in positive self-statements and decreases experiential avoidance predicted later decreases in negative self-thoughts.

In the ST condition, the only predictor of change was the mid-treatment WAI, which was correlated at the trend level or better with Phase II change on all three of the primary dependent variables: the BDI-II \((r = -0.46, p = .057)\), the BSI \((r = -0.46, p = .055)\), the RSES \((r = 0.64, p = .004)\), as well as the AAQ \((r = -0.66, p = .003)\). These data suggest that the change process in ST was quite different from CT and that the convergence of treatment effects for ST at post-treatment may be the result of the therapeutic alliance. Of note, the WAI did not differ between groups at either time point but was much more predictive of change in ST.

**Valued Living Questionnaire**

There were no changes in value ratings during the study. However, 2 (treatment group) x 3 (time) ANOVAs did show statistically significant time, but not time x treatment, effects on actions taken toward values in the areas of friends and social life, \(F(1, 38) = 5.76, p = .007\), and recreation/fun, \(F(1, 38) = 3.97, p = .028\). Actions taken toward values regarding intimate relationships approached significance, \(F(1, 37) = 2.78, p = .076\). At follow-up, actions taken toward values regarding physical self care approach statistical significance, \(F(1, 23) = 3.26, p = .059\). No further changes in values or actions were observed at the follow-up assessment \((p \text{ range} = .09 - .93)\).
Follow-Up

Of the thirty-nine completers, thirty-one finished the 1-month follow-up assessment, and twenty-six also completed the 3-month follow-up assessment. Due to various university breaks and other scheduling obstacles, the 1-month follow-up occurred 5.71 weeks and the 3-month follow-up occurred 11 weeks on average following the post-treatment assessment. Similar to the post-treatment data, one-way ANOVAs conducted at the 1-month follow-up assessment revealed no statistically significant group differences other than a trend on the STFA Ratio $F(1, 29) = 3.28, p = .080$. One-way ANOVAs conducted for the 3-month follow-up revealed no significant differences. Two (treatment condition) x three (time) repeated measures ANOVAs revealed no time effects or treatment interactions (see Table 6). Overall, the data suggest that changes made from pre-treatment to post-treatment were maintained, and that there were no treatment condition differences at 1- and 3-month follow-up assessments.

Table 6. Follow-Up Measures as a Function of Time and Type of Treatment

<table>
<thead>
<tr>
<th>Measure</th>
<th>Post-Tx</th>
<th>1-Month</th>
<th>3-Month</th>
<th>Time</th>
<th>Time x Tx</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI-II</td>
<td>10.82</td>
<td>11.08</td>
<td>10.31</td>
<td>0.31</td>
<td>0.08</td>
</tr>
<tr>
<td>BSI</td>
<td>0.77</td>
<td>0.75</td>
<td>0.71</td>
<td>0.36</td>
<td>0.42</td>
</tr>
<tr>
<td>RSES</td>
<td>29.02</td>
<td>28.92</td>
<td>28.69</td>
<td>0.03</td>
<td>0.35</td>
</tr>
<tr>
<td>AAQ</td>
<td>35.42</td>
<td>34.88</td>
<td>33.46</td>
<td>1.50</td>
<td>0.10</td>
</tr>
<tr>
<td>ATQ</td>
<td>52.96</td>
<td>52.69</td>
<td>53.62</td>
<td>0.12</td>
<td>0.06</td>
</tr>
<tr>
<td>ATQ-P</td>
<td>91.19</td>
<td>92.81</td>
<td>96.81</td>
<td>3.12†</td>
<td>0.55</td>
</tr>
<tr>
<td>Ratio +/-</td>
<td>1.97</td>
<td>2.30</td>
<td>2.21</td>
<td>1.71</td>
<td>1.09</td>
</tr>
</tbody>
</table>

Note. The time effect on the ATQ-P is approaching statistical significance as both group means increased moderately from post-treatment to the 3-month follow-up assessment. †p< .10
Treatment Evaluation

An 11-item questionnaire developed for this study asked participants to evaluate the treatment they received on a scale from 1 (not at all) to 5 (extremely). Items covered the sensibility of the treatment rationale, therapist’s effectiveness and motivation, participant’s effort and mastery of technique taught, participant’s continued use of the technique, and the extent to which the technique became “second nature.” Participants in both conditions rated the rationale for the treatment technique as “very” sensible ($M = 4.03, SD = .87$) and the techniques as “moderately to very” effective ($M = 3.56, SD = .99$). The therapist was rated as “very to extremely” effective in communicating and teaching the techniques ($M = 4.31, SD = .86$) and motivated ($M = 4.54, SD = .55$). Participants believed more contact with the therapist would have been “moderately to very” helpful ($M = 3.41, SD = 1.02$). Participants rated themselves as “moderately to very” compliant with the homework ($M = 3.87, SD = .95$) and their mastery of the techniques slightly lower ($M = 3.42, SD = .99$).

There were statistically significant group differences on two of the treatment evaluation dimensions. Participants in the CT condition rated their therapist as being more effective at communicating and teaching the treatment techniques ($M = 4.57, SD = .68$) than those in the ST condition ($M = 4.00, SD = .97$), $F(1, 37) = 4.66, p = .04$. Participants in the ST condition rated themselves as putting more effort into the therapy ($M = 4.28, SD = .67$) than those in the CT condition ($M = 3.71, SD = .78$), $F(1, 37) = 5.72, p = .02$. There were no other group differences on any of the other treatment evaluation items ($p$ range = .21 - .96).
DISCUSSION

Overall, the evidence suggests that Cognitive Therapy (CT) is more effective in quickly reducing depressive symptoms and general distress among college students than Supportive Therapy (ST). In no case did ST demonstrate statistically significant superiority to CT. That said, the greater efficacy for CT was clearly concentrated in the first three sessions – the Fluency Training (FT) component was significantly superior to ST in decreasing distress and depression. In addition, positive self-thought fluency increased and endorsement of negative automatic thoughts decreased more in CT compared to ST. These data suggest that FT contributed to the mid-treatment changes and greatly exceeded the amount of change produced by common factors. Additionally, the magnitude of change observed in the FT condition in the present study was very similar to that found in prior studies using the same protocol and population (Clore & Gaynor, 2006). Thus, the effects of three sessions of FT appear relatively reliable.

Adding three sessions of the Thought Record (TR) to FT did not appear to produce a dramatic increase in incremental efficacy. However, it should not be concluded that the TR sessions are inert or less efficacious than the FT sessions. In Clore and Gaynor (2006), three sessions of TR was equally efficacious to FT with within-group effect sizes of 1.6 and 1.3, respectively, on the BDI. In the current study within-group effect sizes on the BDI were 1.3 for FT (replicating Clore & Gaynor, 2006) and .40 for ST. Taken together, these data suggest that both FT and TR are more efficacious than ST. Although the CT and ST groups converged by the end of treatment in the present study,
there remained a small-to-medium effect size favoring CT on all variables, with the exception of the therapeutic alliance measure where the effect size was near zero.

While the post-treatment differences did not reach statistical significance there are a number of reasons not to completely disregard them. First, is the pattern of change and the significantly greater initial improvement in CT. Second, is the fact that the sample size is relatively small for a randomized clinical trial comparing two active treatments and, thereby, controlling for effects due to time spent with a therapist, and receiving a sensible treatment rationale with associated techniques. Third, it is important to recognize that it has been difficult to document differential efficacy in treatment trials with mild-to-moderately depressed participants. Dimidjian et al. (2006) found a Selective Serotonin Reuptake Inhibitor (SSRI) and Behavioral Activation to distinguish themselves from a pill placebo only among severely depressed participants. Similarly, there is some evidence for a range of psychotherapies and herbal supplements (e.g., St. John’s wort) in alleviating milder depression (NIMH, 2000). Viewed in this context, the striking mid-treatment differences and directional differences on every variable at post-treatment (see Table 4) appear notable.

The moderator analyses provide further support for this conclusion to some degree. CT was equally effective across genders in decreasing depressive symptoms, while women’s general distress decreased more than men’s regardless of treatment. With respect to self-esteem, women in CT did better than women in ST or men in either condition. Given that the purpose of moderator analyses is to begin to answer the question, “what works for whom?” the present data suggest favoring CT over ST for both genders.
Because the preponderance of change in CT occurred by mid-treatment, it was difficult to identify Phase I predictors of Phase II change on the primary dependent variables. The one significant predictor of Phase II BSI change that did emerge for CT was increased positive self-thought fluency – the primary target of FT. In the ST condition, the only Phase I predictor of improvement during Phase II was the therapeutic alliance, which was not correlated with any change in the CT condition. Thus, the working alliance between the ST therapist and participant established during Phase I predicted improvements in depressive symptoms, general distress, and self-esteem made in Phase II. This is particularly interesting given that both conditions produced strong working therapeutic alliances, with no group differences in the alliance at mid- or post-treatment. These findings may be the result of separate processes. For instance, the first three ST sessions may have established the therapeutic relationship, which facilitated change during the last three sessions. In CT on the other hand, the first three sessions spent building fluency in positive self-statements, as well as a collaborative relationship, may have produced more immediate improvements, which contributed to the developing alliance. Thus, the good alliance was the result of the collaborative approach and early improvement but not a significant predictor of outcome. In other words, clinical improvement may have hinged on a strong working alliance in ST and on an increase of positive thoughts in CT.

Why Cognitions?

From a behavior analytic perspective, one might ask why it is important to change self-thoughts, either positive or negative, rather than to change overt behavior. We are not
suggesting that attempts to change overt behaviors need to be abandoned (i.e., behavioral
activation), but rather that self-statements can also be addressed directly. For verbally
competent humans, self-thoughts are psychologically active; that is they have
psychological functions. Self-thoughts may serve an eliciting-like function based on
either direct or indirect pairings with actual aversive events. A conditioned eliciting
function could be established through a direct pairing of a negative descriptor with an
aversive event.

For example, consider a child being disciplined by a father who employs corporal
punishment. The child is told that s/he is “bad,” and then physically punished. Thus,
“bad” is directly paired with the aversive stimuli of the pain from being hit, and now
might have psychological functions. As the child becomes more verbal, s/he learns that
words such as “loser” and “nerd” are also “bad,” causing them to also elicit aversive
responses. As an adult, the person has the thought, “I’m a loser” and experiences similar
negative emotions. Verbal eliciting functions may also be formed as a result of words
such as “I,” “loser,” “nerd,” and “bad” entering into an equivalence class, and the
function of the negative descriptor is transferred to the self. In other words, each of these
descriptors has an individual functional meaning (e.g., “bad” simply means the opposite
of “good”), however as a person becomes more verbally competent, s/he puts him/herself
in these relations and the derived meanings are then associated with the self (e.g., “I’m a
bad son/daughter. I am a nerd. I am a loser.”).

Self-thoughts may also function as establishing operations in that they alter the
reinforcing effectiveness and evocative functions of other stimuli (Michael, 1993;
Dougher & Hackbert, 2000). For example, the thought, “Nobody likes me” may make the
sight of others a discriminative stimulus for punishment rather than reinforcement (or at least detract from the sight of others functioning as a discriminative stimulus for reinforcement) and increase the likelihood of escape/avoidance behaviors. It may also increase the salience of signs of disliking, while signs of liking go unnoticed.

Skinner (1957) described self-thoughts as evaluative verbal behavior or self-tacts, resulting from social reinforcement, “He comes to see himself only as others see him, or at least only as others insist that he see himself (p. 140).” The social environment also plays an important role in the development of self-thoughts in Relational Frame Theory (RFT). From an RFT perspective, self-thoughts are “produced in part through verbal interactions with significant others, such as parents. Through such interactions, relational frames [of perspective taking and comparison]… are established that lead to an individual to discriminate him or herself as less worthy along a number of dimensions” (Barnes-Holmes et al., 2000; p. 61). It is important to know from a clinical standpoint, if it is possible to create such an environment that leads the individual to know him or herself positively, one that insists the person sees himself as more worthy. Thus, increasing positive self-thoughts through FT may provide such an environment, and may serve as an additional technique for CBT.

Treatment Evaluation

In prior research (Clore & Gaynor, 2006), participants rated the FT and TR conditions equally positively on all dimensions (e.g., sensible, acceptable, motivated therapists, etc.). In the current study, CT and ST were also generally rated positively and equally, with the exception of two dimensions. Participants in the ST condition rated
themselves as having put more effort into the therapy, which may be reflective of the nature of supportive therapy in that the client is responsible for choosing the content of the session, guiding the discussion, and generally speaking more than the therapist. In the CT condition, the therapist set the agenda and assumed more of an “expert role” which may have seemed to the participants to require less “effort” on their part. Another possible explanation is that participants may have viewed talking about their feelings as more effortful than learning new thinking skills.

Participants in the CT condition rated the therapists as “more effective in communicating and teaching the associated therapy skills” than those in the ST condition. On the surface, this may suggest possible therapist allegiance to CT and/or a lack of ST skills. Given that the five therapists were trained in a cognitive-behaviorally oriented program that emphasizes behavior change, this is entirely plausible. However, it is likely that CT participants saw their therapists as better “teachers” because CT therapists assumed more directive, expert-type roles whereas ST therapists were instructed to avoid those roles. Additionally, participants rated both CT and ST therapists as presenting sensible and clear rationales and as highly motivated. Another explanation is that the “associated therapy skills” themselves in the CT condition are more straightforward with clearly defined goals (e.g., increase positive thought fluency, learn to challenge negative thoughts) as compared to those in the ST condition (e.g., increase awareness of emotions). Thus, introducing and teaching the CT skills may also be more straightforward and easier to do effectively. Moreover, the treatment adherence data demonstrated significant adherence to both, distinct treatment protocols and argue against possible allegiance effects.
Limitations

One limitation to this study is the therapist differences in completer percentages (presented in Table 6). Given that the author was the primary therapist (Therapist 1) and had no dropouts, it is likely that motivation played a roll in these attrition rates. In other words, beyond obtaining clinical hours, the other four therapists had less personal investment in the study. Thus, Therapist 1 likely made greater efforts to keep participants enrolled. Another limitation is the generally small sample size, which reduces statistical power for finding between-group differences. However, on the seven dependent measures, there was evidence for three statistically significant interactions and two approaching significance.

Also, this study does not include an index of overt behavior changes other than the action ratings given on the Valued Living Questionnaire. While there were no changes in values, participants did report improvement in their actions toward some of those values at post-treatment. This may suggest that the treatments had a positive effect on overt behavior or that alleviation of depressive symptoms resulted from participants acting more in accordance with their values. An academic performance questionnaire was used, but no significant changes in current GPA or classes missed per week were detected. Relying on self-report measures also limits the ability to distinguish changes resulting from demand characteristics or a Hawthorne effect. However, the self-thought fluency assessment provided samples of actual behavior that go beyond self-report of behavior.
Future Directions and Conclusions

Although Clore and Gaynor (2006) found FT and TR to be equally effective, the current study found that TR did not produce incremental effects beyond three sessions of FT. While it appears that challenging negative automatic thoughts may not provide additional benefit following an increase in positive self-statements, it is unclear whether the reverse would be true. In order to determine whether FT would produce incremental effects beyond three sessions of TR, and whether FT and TR would provide additional benefit to ST, a next study in this line of research could compare the effects of four treatment conditions: 1.) TR-FT (three weekly TR sessions followed by three weekly FT sessions), 2.) FT-TR, 3.) ST-FT (three weekly sessions of non-directive supportive treatment followed by three FT sessions), and 4.) ST-TR. In this way, it would be possible to determine what incremental effects, if any, each cognitive technique would add to each other and to ST.

Because of the specific targets of TR (challenging negative thoughts) and FT (increasing positive thoughts) another possibly interesting comparison might be made with Acceptance and Commitment Therapy (ACT), which teaches clients to behave in accordance with values despite thoughts, rather than trying to change the thoughts. This comparison could have particularly intriguing implications with respect to compatibility and integration of techniques because challenging negative thoughts (TR) attempts to alter thought content, whereas increasing positive thoughts (FT) attempts to enhance fluency and contact with existing positive content, which may ultimately be more congruent with the notion of acceptance.
Additionally, one advantage FT may have over TR is that it is a relatively simple and somewhat familiar technique, and may be particularly useful with a variety of populations for whom the TR may be too complex or may just not resonate (e.g., children, people for whom English is a foreign language, people with reading/writing disorders, etc.). Thus, research investigating the efficacy of FT with diverse populations is also warranted.

Overall, the results of this study have several important clinical implications. First, they provide empirical support for the use of FT in increasing positive self-statements, decreasing depression and general distress, and improving low self-esteem. Thus, broader evaluation of FT’s efficacy as a stand-alone cognitive technique and as a component of a larger CBT package is warranted. Second, this study demonstrated that a highly structured, collaborative treatment does not produce poor therapeutic alliance or, indeed, an alliance that is different from ST; rather, strong working alliances were seen in both conditions. Third, early therapeutic alliance appears vital to clinical improvement in ST, which is consistent with its theoretical underpinnings. Lastly, because of the quicker and larger impact, CT may be the best option for treating depression in a college sample. As mentioned earlier, when college students seek professional mental health services, they often receive only 3-6 sessions (Stone et al., 2000) and may especially benefit from active, brief treatment (Chandler & Gallagher, 1996; Furr et al., 2001).

These data also speak to the effects of specific techniques rather than an entire treatment package. Because most therapists describe themselves as eclectic, it has been suggested that independently validating techniques may promote their integration by practitioners (Lampropoulos, 2001). Assessing the impact of specific techniques may
contribute to a greater understanding of their necessity and/or sufficiency in the change process. Recent dismantling studies of CBT for depression (e.g., Jacobson et al., 1996) have called into question the incremental utility of cognitive techniques beyond behavioral activation, but our findings suggest that both FT and TR alone may be sufficient.

Little is known about the specific mechanisms of change responsible for the efficacy of CBT. As a didactic approach, CBT has failed to incorporate the notion of fluency. This study provides support for incorporating FT into CBT by demonstrating its ability to produce large, clinically significant improvements in a very short amount of time above and beyond an active, control therapy.
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Wilson, K. G. & Groom, J. (2002). *The Valued Living Questionnaire*. Unpublished document, available from the first author at the Department of Psychology, University of Mississippi, University, MS.
Appendix A

Treatment Comparison Table

<table>
<thead>
<tr>
<th>Session</th>
<th>Cognitive Therapy (CT)</th>
<th>Supportive Therapy (ST)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Treatment Assessment</td>
<td>Consent, screening, rapport building, and completion of assessment questionnaires and STFA.</td>
<td>Consent, screening, rapport building, and completion of assessment questionnaires and STFA.</td>
</tr>
<tr>
<td>(1 hr total)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Therapy Session I</td>
<td>Introduction to fluency training, skill practice, corresponding homework assigned.</td>
<td>Introduction to supportive therapy, exploration of feelings, awareness homework assigned.</td>
</tr>
<tr>
<td>(1 hr)</td>
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<td>Therapy Session II</td>
<td>Review FT homework and continue skill practice.</td>
<td>Review homework, continue ST, gaining an understanding of the participant’s perspective.</td>
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<tr>
<td>Therapy Session III</td>
<td>Review FT homework and continue skill practice.</td>
<td>Review homework and continue ST.</td>
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<tr>
<td>Mid-Treatment Assessment</td>
<td>Completion of questionnaires and STFA.</td>
<td>Completion of questionnaires and STFA.</td>
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<tr>
<td>Therapy Session IV</td>
<td>Review homework, introduction to the thought record, skill practice and corresponding homework assigned.</td>
<td>Review homework and continue ST.</td>
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<td>Therapy Session V</td>
<td>Review TR homework and continue skill practice.</td>
<td>Review homework and continue ST.</td>
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<tr>
<td>Therapy Session VI</td>
<td>Review TR homework and continue skill practice.</td>
<td>Review homework and continue ST.</td>
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<tr>
<td>Post-Treatment Assessment</td>
<td>Completion of questionnaires and STFA.</td>
<td>Completion of questionnaires and STFA.</td>
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<tr>
<td>1-Month Follow-up</td>
<td>Completion of questionnaires and STFA.</td>
<td>Completion of questionnaires and STFA.</td>
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<tr>
<td>3-Month Follow-up</td>
<td>Completion of questionnaires and STFA.</td>
<td>Completion of questionnaires and STFA.</td>
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Appendix B

Treatment Protocols and Homework Forms

Cognitive Therapy – therapist tip sheet

Cognitive therapy rests on the notion that the way a person interprets life experiences influences how s/he feels about those events and his/her coping behaviors. According to CT, people who are prone to depression have negative perceptions of themselves, their worlds, and their future.

Provide Rationale
“The main focus of this Tx is to teach you some techniques for thinking differently. Specifically, we will work to increase your positive thinking skills and to help you cope more effectively with negative thoughts. Low self-esteem is often the result of our thoughts being dominated by negativity rather than benefiting from positive experiences. This may be because we are never explicitly taught how to think about ourselves. In fact, we are often taught to be humble, not to brag, etc., which may lead to the negative experiences dominating our thinking patterns.

Learning techniques for thinking differently is important because our thoughts can influence our feelings and behaviors. For example, if I asked you to just feel happy right now, without doing anything differently, can you do it? No, if we could change our feelings that easily we would all be happy. Now, I want you to close your eyes and imagine a bear. How do you feel (e.g., neutral)? Now imagine you’re camping and as you unzip your tent you see the bear staring back at you. How do you feel now (e.g., scared, nervous)? Now imagine the bear is wearing purple poka-dotted underwear. How does that thought make you feel (e.g., like laughing)? So, you can see how different thoughts can make us feel differently.

In our work together I will attempt to teach you some techniques to think more positively and ways of handling the negative thoughts. To be successful, we will need to work collaboratively and to communicate openly. If there is anything you do not understand about the techniques we discuss, please feel free to ask questions. Also, our ultimate goal will be for you to be able to use these tools independently, which will require a commitment to practicing these skills in and out of our therapy sessions. Does that sound like something you can do?”

Cognitive Therapy Approach

Purpose: Help the client to recognize, examine, and modify thinking patterns to improve overall mood, feelings, and behaviors.
Goal: Establish a collaborative therapeutic relationship to facilitate changes in thinking patterns in and outside of therapy.

- Therapist Objective = educate the client in the use of two techniques: (1) FT to increase the automaticity of positive thoughts and (2) TR training to examine and modify maladaptive negative thoughts. The ultimate goal is to help the client learn to use these tools independently.
• Therapist behaviors to engage in:
  o Collaborate with the client to set an agenda at the start of each session.
  o Use Socratic questioning to help generate new positive self-thoughts and to
    shed light on dysfunctional negative thinking patterns.
    ▪ What things are you proud of in your life?
    ▪ How would your friends or family describe you? (Use specific people
      in their lives once you get a better sense of their social support
      network.)
    ▪ What evidence is there for that thought?
    ▪ What alternative interpretation can you think of?

• Skills practice: Fluency Training (Sessions 1-3):
  o Ask client to write self-positives from STFA on flashcards and contextual
    cues on the prompt side (e.g., person’s name, life domain, etc.)
  o Have the client read through his/her set of cards silently a few times, focusing
    on committing them to memory. Encourage him/her to shuffle.
  o Conduct flashcard drills until the client tells you s/he can remember the entire
    set without the cards. Be sure to shuffle!
  o Conduct the 3 timed mastery trials (client speaks aloud their entire set of self-
    positives without hesitation 3 times consecutively while the therapist times
    them). If the client stumbles or blanks, return to the flashcards and practice a
    few more times.
  o After a set is “mastered,” the total number of self-positives in the original list
    is added (e.g., if the client starts with 4, they add 4 more to each mastered set,
    so that there would be 8, 12, 16, and so on). Use the master list of self-
    positives if needed, but try to help the client generate them on his/her own,
    especially the first time. Ask the client to provide examples of behavior
    demonstrating each new self-positive they add to ensure that they are
    personally relevant.
  o Continue through these steps for the first 3 sessions.
  o Homework: 1 minute daily drills of self-positives and 3 daily shuffles
  o Remind client that the next session will start with the timed mastery trials

• Skills practice: Thought Record training (Sessions 4-6):
  o Note. No new fluency goals will be set after the third FT session, however the
    remaining sessions will all start with a FT maintenance drill (e.g., give client a
    minute to review cards silently. Then give them one minute to write as many
    as possible.)
  o Begin with a negative thought from the client’s STFA and ask the client to
    give you an example from the last week when s/he felt that way.
  o Work through the TR using this example discussing the situation in which
    they felt badly, the automatic thoughts they had (circle the “hot thought” and
    focus on it for the other columns), overall mood, list evidence that supports
    the “hot thought,” evidence that does not support it, generate an alternative
    more balanced thought, and their current mood about the situation.
  o Problem-solve when appropriate, especially if there are any reoccurring
    automatic thoughts or situations that give rise to them.
- Continue working through TR examples as long as time allows for sessions 4-6.
- Homework: 3 TR entries per day and daily review of hot thought
- Remind client that the goal is to be able to use this technique independently

**Therapist should NOT be…**
- Discussing negative thought during the FT sessions.
- Spending much time discussing the client’s emotions and feelings.
- Spending much time discussing the week’s events unless they relate to the generation of more self-positives or a specific TR example.

*If the client asks you explicitly to talk about something that was particularly distressing from the last week, give him/her an opportunity to tell you about it and then discuss it couched in a cognitive context. This is easiest to do with the TR – gently continue through each of the columns. If it happens during the first 3 FT sessions, spend some time on it and use Socratic questioning to guide the client to a positive or more balanced interpretation – it may even lead to the generation of a new self-positive to add to their set.*

**Conducting the session**
- **Starting the session** – review the agenda and ask the client if there is anything in particular that they could like to discuss or if they have any questions from the last session, etc.
  - **Starting first session** – using an example from the client’s STFA, introduce the new skill to be learned. Conduct several skill practices slowly at first to ensure understanding. The following sessions will go quicker as the client becomes more fluent.
  - **Subsequent sessions** - Check completed homework and discuss any obstacles and/or congratulate them on doing it and ask how it felt, how they were successful, etc.
  - **FT sessions:**
    - Conduct mastery trials. If the client isn’t able to complete 3 timed trials, recycle to the flashcard practices.
  - **TR sessions:**
    - Conduct FT maintenance drill. Ask client to walk you through their TR homework entries and help clarify any misunderstandings.
- **Middle of the session – continue skill practice**
  - **First session** – when clients struggle with new technique use it to introduce the homework rationale and need for practice
  - **FT sessions:**
    - Use new self-positives from client’s daily 1-minute drills when generating new self-positives to add to their set
  - **TR sessions:**
    - If any homework entries were off track, try working through them again to ensure understanding of the process otherwise continue working on other novel examples as long as time allows. If you notice a theme in negative thinking or in the situations, discuss it.
Ending the session – Explain and assign corresponding homework.

**CT Homework Assignments**

**FT Sessions 1-3**

- **Rationale:** All new skills require practice. For example, how did you become good at X (use positive skill from STFA or session content)? Were you always good at? Give another example (e.g., driving a stick shift). Explain that thinking positively is a skill to be learned, so in order to become good at it, we have to practice.

- Encourage the client to carry his/her flashcards with him/her at all times, and to review them frequently, at least 3 times per day. Good times might be while waiting for class, while working out, during commercials, etc. Then present the client with the daily monitoring sheet and ask him/her to take one minute everyday to write as many self-positives as possible. These can come from his/her set of flashcards or be completely new. Encourage him/her to do the daily drill at the same time everyday so that they’re more likely to remember to do them.

**TR Sessions 4-6**

- **Rationale:** Review the need for practice to learn new techniques.

- Encourage the client to try and work through the TR process whenever they experience negative thoughts, and to carry their TR with them so that they can fill it out frequently. Present them with copies of the TR to take with them and encourage them to fill it out at least 3 times per day. Also ask them to review the examples and “hot thoughts” from the session to become more familiar with the process.
FT Homework

- **Rationale:** Thinking positively is a skill just like anything else and requires repeated practice to become more automatic.
- **Flashcard drills:** Over the next week I would like you to review your positive self-thought flashcards as often as possible, and at least 3 times per day. Carry them with you and review them during any down time (e.g., while waiting for class, or during commercials when watching TV, or while working out). Record hash marks in the table below to indicate how many times you reviewed your flashcards on each day.
- **1-minute drills:** I would also like you to take one minute everyday to write as many positive things about yourself as possible just like we did in the assessment procedure. These can come from your set of flashcards or they can be completely new. Remember, you do not need to write complete sentences, just a word or two to identify the thought. Try to include things you hear others say about you as well. If you do your 1-minute drill at the same time everyday, you’ll be more likely to remember to do it. Please use the journal below to log your daily drill.

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
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TR Homework

- Rationale: Examining and challenging our negative thought patterns can help us to modify them and see the world in a more balanced way. This technique is a skill just like anything else and requires repeated practice to become more automatic.
- TR entries: Over the next week I would like you to review the examples we’ve done in session, and complete at least 3 entries per day on your own until our next session. Try to carry these forms with you frequently, so you can fill them out on the spot and hopefully help you to feel better right then and there.
- Instructions for columns:
  - Situation – When? Where? What was happening? Who was there?
  - Mood – Specify your overall mood in the situation and rate the intensity on a scale of 1-10 (10 being the most distressing)
  - Automatic thoughts or images – What was going on in your mind just before you started feeling this way? List as many thoughts as you have. Re-read them and rate how distressing each one is on the same 1-10 scale. Circle the thought (there may be 2) that causes you the most distress and focus on it for the rest of the form. This is your “hot thought.”
  - Supporting Evidence – List evidence that supports your “hot thought.” What makes you think this is true?
  - Non-supporting evidence – List all evidence that is contrary to your “hot thought.” How might this thought not be true?
  - Alternate/balanced though – Re-read both evidence columns and generate a new alternative, more balanced interpretation. Rate the believability of this thought from 0-100% (completely believe it).
  - Current mood – Specify your current mood after completing the form and rate the intensity on the scale from 1-10.

<table>
<thead>
<tr>
<th>Situation</th>
<th>Mood</th>
<th>Automatic thoughts</th>
<th>Supporting evidence</th>
<th>Non-supporting evidence</th>
<th>Alternate balanced thought</th>
<th>Current mood</th>
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63
Supportive Therapy – therapist tip sheet

Supportive therapy rests on the notion that unpunished expression of negative thoughts & experiences is in-and-of-itself helpful. Some research suggests that attempts to actively suppress negative thoughts may be disruptive, producing an increase in negative appraisals, while making contact with negative thoughts might actually decrease their frequency – (i.e., the paradoxical effect of thought suppression, see Wegner et al, 1987; Wenzlaff & Wegner, 2000). Thus, therapists should take caution not to consider ST to be an inert condition, rather as controlling for common factors.

Provide Rationale

“The main focus of this treatment is on exploring feelings. Low self-esteem is often the result of not acknowledging or understanding your feelings. This may be because of hiding or stuffing feelings and letting them eat away at us. Hiding or stuffing feelings is understandable because we don’t always have people in our lives that we can talk to about these personal issues, or maybe we don’t want to burden friends with our problems. Sometimes we hide our feelings even from ourselves and don’t see them clearly until we begin to open up and start to talk about how we are feeling. By identifying and talking about your feelings you can come to better understand yourself and to develop your own solutions to the problems that concern you.

In our work together I will attempt to understand what you are feeling and help you to explore your feelings. To be successful, the therapy environment needs to feel safe, nonjudgmental, and supportive so that you can talk about painful and emotional topics openly. Establishing this connection is an important first step to any therapy, so I would like to spend the first few sessions getting to know one another. During these sessions I will ask you to help me understand the sorts of things you’re struggling with.

Outside of session you will practice monitoring and identifying your feelings. This will help you build awareness. Today we will work on some examples of how to use a monitoring form that was developed for this purpose. After this session you will be asked to monitoring some of your feelings each day. This will start out very general having you monitor any emotions that you recognize; however, once we get to know one another better we’ll probably see some specific experiences/feelings that might be useful to track regularly. During our meetings we will then review these experiences/feelings and other examples that are important to you so that you can express what you feel in a nonjudgmental setting. There is no right or wrong with feelings, the goal is to learn as much as you can about yourself and what your emotions mean to you. My job is to aid you in this self-discovery process by helping you to clarify your feelings, articulate these feelings, and explore what they mean to you.”

Supportive Therapy Approach

Purpose: Help the client become aware of and access his/her emotional experience, not to change behavior directly.

Goal: Establish empathetic, nonjudgmental therapeutic relationship to facilitate accessing emotions.

- Therapist Objective = Empathic attunement – understand the world from client’s vantage point.
• Therapist behaviors to engage in:
  o Ask open-ended exploratory questions that center on client’s experiences
    ▪ What are you experiencing right now?
    ▪ What were you aware of right then?
    ▪ What do you (or did you) want from that relationship/person?
    ▪ What does (or did) that feel like?
    ▪ What was your perception?
    ▪ What did that mean to you?
    ▪ What did you take from that?
    ▪ What were you hoping would happen?
  o Empathic Reflective listening – re-statements of what client said to reveal your understanding, especially reflection of immediate feelings/emotionally charged material
    ▪ Not just parroting, but expressions revealing understanding of the experience (what it was like for the person) not just understanding of the words used.
    ▪ Inviting client to correct you or clarify your understanding
      • Does that fit?
      • Was that what it was like?
  o Communicating/expressing genuine empathy and interest –
    ▪ Uh-huhs, Mmm-hmmm
    ▪ Head nods, smiling
    ▪ Yes, I understand
    ▪ Personal experiences of therapist with client (e.g., I felt really touched today by what you explored.)
  o Clarifying (emotional) questions – designed to help client tell his/her story and contact emotions, not to get the facts. (e.g., “What were you feeling when you said that?” Instead of “What was your goal in saying that?” or “What did your dad say back?”.)
• Therapist should NOT be…
  o Providing solutions or giving advice
    ▪ No problem-solving
    ▪ No recommending trying new behaviors or telling client what to do
    ▪ No taking on of “expert” role
  o Making interpretations
    ▪ Do not attempt to explaining client behavior or provide a conceptualization of problems (the goal is to capture what it was really like for the person, not to identify some theme or dysfunctional process)
    ▪ Refrain from trying to offer the client something new or outside of his/her immediate experience (your job is NOT to shed new light on the situation but to communicate understanding of the clients experience)
    ▪ Do not attempt to alter his/her beliefs about self or experience
  o Offering expert reassurance
- No “pep” talks, normalizing, praising, predicting positive outcomes, or attributing positive characteristics to the client done from an “expert” position
  - Directing content – asking questions or making statements that control the content of what is discussed
  - Disagreeing/Confronting
    - No pointing out contradictions or discrepancies, offering a different perspective, or blaming (e.g., trying to get the client to take responsibility for an outcome)

*If the client asks you explicitly to take one of these roles (e.g., what should I do?) remind the client, in a supportive therapy consistent way (not as an expert) of how it is important that s/he make his/her own judgments during this process of self-discovery. For example, you might say “I understand that it’s hard to have me not tell you what to do, but I feel I just couldn’t possibly know what is the best solution for you. I would like to help you to find your own answer to your problem.”*

**Conducting the session**
- Starting the session – Where should we start? What would you like to focus on or talk about?
- Starting first session – I don’t know what you might want to start with, but I’m very ready to hear. I hope that in the next hour we can begin to get to know each other as deeply as possible. Do you want to tell me what’s on your mind as a place to start?
  - To get the ball rolling and facilitate disclosure ask
    - Open ended questions using information from STFA
      - You said you were __________. What’s that feel like? What does that mean to you?
    - Open ended questions about emotional experiencing
      - Tell me about the most recent time you felt really down on yourself, sad, angry, happy, content…
    - Open ended questions about life circumstances (in follow-up questions be sure to focus on client’s experience not the content)
      - What areas of your life do you feel like are working and not working…
- Middle of the session – review experiences from the emotion monitoring form
  - Middle to last third of first session – Use some of the session material, if possible, to introduce and complete the emotion monitoring form.
- Ending the session – Summary of important material/emotions with explicit invitation to client to correct mistakes or provide further clarification. Awareness homework.

**Awareness Homework Assignment**
- Sessions 1-3
  - Rationale: Monitoring your emotions outside of therapy will increase your awareness of your internal experience and help me better understand your experiences.
  - The goal of homework is NOT to provide answers to the client’s problems – behavioral homework is avoided, not because it is “bad”
but because it is not consistent with the underlying principles of the approach.

- Present the client with the emotion monitoring form and instruct him/her in its use. “During the rest of the week it might be useful for you to continue building awareness of your feelings. This form can help. On this form you can identify any emotional experience you’ve had during the day. There are no right or wrong answers and no emotion is too big or too small. Sometimes more that one emotion emerges in a situation; in these cases you can identify all the emotions that were present. If possible, try and identify 3 experiences each day until our next meeting.”
- Use an example, from session if possible, to illustrate how to complete the form.

**Sessions 4-6**
- Based on the salient topics in session therapist can suggest that client attend to certain kinds of emotional experiences outside of the session. For example, if salient topic has been how client criticizes self, the therapist might suggest that because this seemed a potent area for the client that “During the week, it might be useful to become more aware of when and how you do this to yourself.” To be consistent with ST approach this should not be stated as a directive and client should be explicitly asks if this fits with his/her experience of the session and what was salient. In fact, it is even better if client can identify salient area for monitoring without therapist.
ST Homework

- Rationale: Moods go up and down throughout the day. In order to get control of our moods we must first begin to observe these patterns. Monitoring your emotions outside of therapy will facilitate better awareness on your own part as well as help me better understand your experiences.

- Mood Monitoring form: Over the next week I would like you to complete the following form. Every few hours, at least 3 times per day I would like you to take a moment and write down how you are feeling. You may also jot down a few notes as to what was happening in your life when you felt this way. You can use the following scale to guide you:
  - 10 – feeling great
  - 9
  - 8
  - 7
  - 6 – feeling stronger
  - 5 - neutral
  - 4 – feeling weak or threatened
  - 3
  - 2
  - 1 – feeling deeply down

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Appendix C

Consent Document

Western Michigan University
Department of Psychology

“Brief interventions for distressed collegiates with low self-esteem”
Principal Investigator: Scott Gaynor, Ph.D.
Student Investigator: Jean L. Clore, M.A.

You have been invited to participate in a research project entitled “Brief interventions for distressed collegiates with low self-esteem” designed to assess the efficacy of two psychosocial treatments for low self-esteem. Dr. Scott Gaynor and Jean Clore from Western Michigan University’s Department of Psychology are conducting this study.

Should you agree to participate in this study, you will be asked to attend 6 weekly private 1-hour therapy sessions and five 30-minute assessment sessions (pretreatment, midtreatment, posttreatment, a 1- and 3-month follow-up). Thus, total involvement in this study requires approximately 2 months of weekly meetings and 1- and 3-month follow-up sessions. The first assessment session will begin today and include 2 screening questionnaires assessing psychological symptoms and self-esteem to help determine if you qualify for the study. If you are experiencing strong suicidal thoughts, then this study is not the best treatment for you. If you are currently receiving psychological treatment or have been taking medications for psychiatric reasons for less than 8 weeks, you cannot participate in this study. If you do not qualify for the rest of the study, you will be given a therapist referral list, which includes some locations that offer free services to students, including a 24-hour support number. Immediate crisis counseling will also be provided if you are of imminent danger to yourself. If you do qualify for this study, you will be asked to complete more questionnaires asking questions regarding general information, such as your age, grade point average, race, etc. as well as more personal questions regarding your thoughts and attitudes about yourself. These questionnaires will be placed in a sealed envelope that will not be opened until after you have completed the study. All of the questionnaires asking about sensitive information are well validated and widely used in research. Should you begin to feel distressed while filling out the questionnaires, you are free to not answer any particular question on a survey.

After completing the pretreatment assessment measures, if you qualify you will be randomly assigned to one of two therapies. In both the goal is to improve self-esteem. Regardless of which therapy you are randomized to you will receive the same number of sessions and complete the same assessment forms. Both will involve discussing personal thoughts, emotions, and experiences and will involve completing brief exercises outside of session. One therapy operates from the premise that low self-esteem often involves failure to acknowledge or understand your feelings and that by identifying and talking about feelings you can come to better understand yourself and to develop solutions to the problems that concern you. The other therapy operates from the premise that low self-esteem often results from overemphasizing the negative and that by learning to think
more positively about yourself and to respond to negative thoughts more effectively you can improve your quality of life. Both of these treatments have been widely used in clinical psychology, in research and practice settings. If you decide to stop participating in the therapy sessions, you will still be invited to attend the assessment sessions. You are also free to completely stop participating in this study for any reason at any time without penalty.

If you choose not to participate in this research study, you may receive similar treatment for low self-esteem at the WMU Psychology Clinic (sliding scale fee from $0 to $20), the University Counseling and Testing Center (free), or from a practitioner in the community. If you should choose to pursue treatment elsewhere, the researcher will provide you with a list of referrals. You will be responsible for the cost of alternate therapy if you choose to pursue it. As in all research, there may be unforeseen risks to the participant. Appropriate emergency measures will be taken should you experience severe psychological distress; however, no compensation or treatment will be made available to you except as otherwise specified in this consent form. One potential risk of your participation in this project is that you may experience some discomfort as we discuss sensitive thoughts, feelings, or experiences; however, this risk is no different from that present in any psychotherapy context and is understandable considering the treatments are designed to address low self-esteem. The researcher is a trained therapist prepared to provide crisis counseling should you become significantly upset or to make a referral if you need further counseling at the conclusion of the study.

One way in which you may benefit from this study is in a reduction of distress and increased sense of self-worth. Research has shown that both of the treatments offered can improve self-esteem. However, we cannot guarantee a positive outcome and it is possible that your symptoms will not improve during your participation in this study. An indirect benefit of your participation is that others who experience low self-esteem may benefit from the knowledge that is gained from this research. Once the study is completed, you may receive a general summary of the results if you wish.

All of the information collected, including the results of the assessment measures and treatment are strictly confidential and will not be revealed to anyone in connection you’re your name without your written permission, except where disclosure is required by law. Your therapist is legally required to report reasonable suspicion of child, dependent, or elder abuse or neglect, or if you present a clear and imminent danger to yourself, to others, to property, or are gravely disabled. If there is an emergency during the course of this study, where your therapist becomes concerned about your personal safety or the possibility of you injuring someone else, s/he will do whatever s/he can within the limits of the law to prevent you from injuring yourself or others and to ensure that you receive the proper medical care. For this purpose, s/he may also contact the police or hospital. Your name will not appear on any of the questionnaires or other papers used to record information. The only document that will have your name on it will be this consent form and on a contact information sheet used for scheduling purposes. You will be randomly assigned a code number from 1-100 that will be used on all of the questionnaires and written thoughts.

The therapy sessions will be audio or video recorded, and a trained graduate student will view 25% of the session videotapes to evaluate treatment integrity. This means that another graduate student will view one or two of your tapes to check the
competence of the therapist and their focus will be on what the therapist is saying/doing. These graduate students will be identified following data collection. In order to maintain confidentiality, coders will view all tapes in a private location without any other individuals around, will not have access to the questionnaire data, and will not disclose any information about you or your session to anyone. Your code number will be used to label these videotapes, so your name will not appear on the label. However, because the coders will most likely be graduate students in the clinical psychology program, there is some possibility that the person viewing your tape may recognize you from a class or some other University activity in which you were both involved. While we think that the likelihood of the coder knowing you in some capacity is small, should this happen, the coder will immediately stop the videotape and inform Ms. Clore or Dr. Gaynor, at which point another coder will be assigned or another participant’s videotape selected. All data will be stored in a file cabinet and locked in room 1524 of Wood Hall. Dr. Gaynor will retain the data for at least 5 years, after which it will be destroyed. Participants will not be personally identified in any reports or publications that may result from this study.

You may refuse to participate or quit at any time during the study without prejudice or penalty. If you have any questions or concerns about this study, you may contact either Dr. Scott Gaynor (269.387.4482) or Jean Clore (269.387.4497). You may also contact the Chair of the Human Subjects Institutional Review Board (269.387.8293) or the Vice President for Research (269.387.8298) if questions or problems arise during the course of the study.

This consent document has been approved for use for one year by the Human Subjects Institutional Review Board (HSIRB) as indicated by the stamped date and signature of the board chair in the upper right corner. Do not participate in this study if the stamped date is older than one year. Your signature below indicates that you have read and/or have read to you the purpose and requirements of the study and that you agree to participate.

Participant Signature

Date
Appendix D

HSIRB Approval Letter

HSIRB Approval letter is on file at the Graduate College.