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Functional Analytic Psychotherapy Compared to Watchful Waiting for Enhancing Social Connectedness: A Randomized Clinical Trial with a Diagnosed Sample

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FUNCTIONAL ANALYTIC PSYCHOTHERAPY COMPARED TO WATCHFUL WAITING FOR ENHANCING SOCIAL CONNECTEDNESS: A RANDOMIZED CLINICAL TRIAL WITH A DIAGNOSED SAMPLE

by

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A Dissertation submitted to the faculty of the Graduate College in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Psychology
Western Michigan University Kalamazoo, Michigan
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The efficacy of Functional Analytic Psychotherapy (FAP) has not yet been show in randomized controlled trials in any population. The current study utilized a stratified randomization technique conducted by a computer system to assign twenty-three college students recruited for difficulties in interpersonal functioning who scored one standard deviation below the norm on the Fear of Intimacy Scale and met diagnostic criteria via independent assessment for Major Depressive Disorder, Generalized Anxiety Disorder, Social Anxiety Disorder, Avoidant Personality Disorder, or Dependent Personality Disorder to either a FAP condition or a Watchful Waiting Condition to assess the conditions ability to increase social relating and decrease psychological distress immediately following treatment. Twenty-two (eleven in each condition) participant’s results were analyzed showing mean differences reaching significance on the fear of intimacy scale and a measure of psychological distress (Psychiatric Diagnostic Screening Questionnaire). Additional measures showed emerging evidence that supports FAP’s proposed mechanism of action. Results suggest that a brief FAP intervention can be beneficial for increasing interpersonal relating and decreasing psychological distress.
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I would like to begin by acknowledging the influence of my mother. Without her support, guidance, and love, I would have never made it this far. I cannot ever hope to properly express the gratitude, respect, and love I have for you. Thank you for always being there for me. Before I was introduced to any of this, you taught me how to live a life consistent with my values. Secondly, I’d like to thank my advisor, Dr. Scott Gaynor. It takes a special person to be able to point me in the right direction. From day one, you have modeled being the type of person I strive to be. I do not think there’s a way I could respect you more as a person, or a professional. Thank you for always being there for me. Thank you to my committee Dr. Jonathan Kanter, without your support and guidance, none of this would have been possible. Thank you so much for introducing me to FAP and your unwavering support through the years. Dr. Amy Naugle, I have never met a person I was more sure would fight for me when the chips were down. Dr. Galen Alessi, thank you for teaching me how to learn from every story that I hear. I’d also like to thank the BRAT lab members, former and present. Thank you for your guidance and support…and the obscene amount of work you put into my research. Thank you to the FAP community, particularly Mavis and Bob, it’s rare to find a community that changes your life in so many ways. Lastly, thanks to all my friends.

Daniel W. M. Maitland
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INTRODUCTION

There is significant divide in clinical psychology between clinical practice and research (Kazdin, 2008). This divide stems in part from a shift in private practice to only utilizing treatments that have been categorized as empirically supported. The process of determining if a treatment is empirically supported can be a tedious task. Researchers are asked to consider if the treatment has been shown to be beneficial in a controlled setting, beneficial in a clinical setting and assess if the treatment is cost efficient (Chambless & Hollon, 1998). More recently, a three stage model of behavioral therapies research has been suggested (Rounsaville, Carroll, & Onken 2001). Broadly speaking, the three stages represent three domains of a research line. Stage I consists of assessing feasibility, writing manuals and developing training programs and assessment tools. These steps should be completed before moving on to other stages. A treatment in stage one includes treatments that are newly developed or untested; the goal is to understand the process involved in the changing of behaviors. Stage II starts by utilizing randomized clinical trials to assess efficacy of treatments that have shown promise in Stage I. Research in this stage investigates mechanisms of action and involves conducting component analyses to understand what the active and important aspects of a treatment are. Lastly, Stage III focuses on dissemination of treatments that have been shown effective in two or more randomized trials. Stage III research begins to look at
other logistical issues such as the cost effectiveness of treatment, marketing and other implementation issues. Research in any stage requires utilizing a manual or the logical equivalent. Often times, researchers have utilized a manualized treatment to intervene on a specific diagnosis. It is possible that a difficulty in manualizing a treatment has created barriers in research for some forms of therapies such as Functional Analytic Psychotherapy (FAP; Maitland & Gaynor, 2012).

**Functional Analytic Psychotherapy**

FAP is identified as a third wave or third generation behavior therapy. One common trend of this group of therapies is a focus on the function of behavior instead of the topography (Hayes, 2004). In FAP this characteristic is most noticeable in the proposed primary mechanism of action. FAP emphasizes how the client’s behavior operates in the world, including within the therapy session. The proposed mechanism of action is therapist contingent responding to clinically relevant behaviors (CRBs) emitted by clients that are manifestations of clients target behaviors that occur in session. There are three types of CRBs that are identified in FAP: CRB 1s are the class of behaviors that have been identified by the client and therapist as problem behaviors that occur in session, CRB 2s are improvements in problematic behaviors, and CRB 3s are attempts by the client to identify causality in their behavior. Therapist responses are aimed at decreasing the occurrence of CRB 1s, while increasing the occurrences of CRB 2s and CRB 3s. This is achieved through utilization of five rules that function as flexible guidelines for therapist action in a FAP context. The rules are 1) watch for CRB, 2) Evoke CRB, 3) Reinforce CRB, 4) Notice your effect on the client, 5) Provide
functionally informed interpretations of client behavior and attempt to generalize changes to day-to-day life (Kohlenberg & Tsai, 1991).

There are many reasons FAP research has made little progress towards becoming an empirically supported treatment. Unlike many therapies, FAP’s approach to psychotherapy is not based on a model of psychopathology or a specific disorder (Maitland & Gaynor, 2012). While this allows FAP to be broadly applicable, directly assessing FAP becomes difficult as there is no specified dependent variable. FAP’s idiographic tendencies and unspecified dependent variable lead to difficulties to manualize the treatment as no global case conceptualization has yet been identified (Bonow, Maragakis, & Follette, 2012). While progress has been made (Callaghan, 2006) there is currently no reliable method for conducting functional analyses in clinical psychology and measuring functional classes of behavior (Follette & Bonow, 2009). This deficiency has resulted in FAP being researched as an additive component to other treatments (Kohlenberg, Kanter, Bolling, Parker, & Tsai, 2002) and an abundance of case studies, with a relative dearth of experimental publications (Mangabeira, Kanter & Del Prette, 2012).

In a recent review of the FAP literature spanning 1990 to 2010 (Mangabeira, Kanter & Del Prette, 2012), it was found that 80 articles had been published by 90 authors. The topics covered in the FAP literature are quite varied; most popularly they investigated FAP contributions (39), interventions using FAP (27) and FAP characterization (25). Other topics covered include integration of therapies (7), group therapy based on FAP (6), comparison between CBT and FAP (1), development of an
instrument for FAP (4), comparisons between ACT and FAP (4), child/adolescent therapy based on FAP (3), FAP supervision (5), analysis of empirical data about FAP (5), efficacy study of FAP (4), therapist training based on FAP (1), and couples therapy based on FAP (3). The majority (46) of these publications focused on theoretical issues. Of the remaining papers one was a between groups design (Kohlenberg, Kanter, Bolling, Parker & Tsai, 2002). However, it is worth noting that this study investigated FAP’s additive effects as opposed to a pure FAP protocol and compared cognitive therapy to FAP-enhanced cognitive therapy; furthermore, it was not a randomized clinical trial. The remaining 33 non-theoretical publications were predominately case studies (29) and a small number of reversal designs (4).

Narrative case studies, quantitative case studies, and small N studies have described FAP or FAP enhanced treatments for depression in adults (Ferro, Valero, & Vives, 2000, McClafferty, 2012), depression in adolescents (Gaynor, & Lawerence, 2002), anxiety disorder without agoraphobia (López Bermúdez, Ferro, & Calvillo, 2002), exhibitionism (Paul, Marx, & Orsillo, 1999), narcissistic personality disorder (Callaghan, Summers & Weirdman, 2003), adults who have committed sexual offenses (Newring, & Wheeler, 2010), chronic pain (Vandenberghe, Ferro, & Furtado 2003), anorgasmia (Oliveira Nasser, & Vandenberghe, 2005), fibromyalgia (Queiroz, & Vandenberghe, 2006), obsessive compulsive disorder (Vandenberghe, 2007), orgasmic disorder (Vandenberghe, Oliveira Nasser, & Silva, 2010), and post-traumatic stress disorder (Pedersen, Callaghan, Prins, Nguyen, & Tsai, 2012). The majority of the studies utilized a pure FAP protocol (Mangabeira, Kanter & Del Prette, 2012); however, most of
these publications were narrative case studies with no objective or quantitative data collected. Studies that integrated FAP with another treatment have included a great deal more quantitative data about FAP efficacy.

In a non-randomized trial, FAP-enhanced cognitive therapy (FECT) for depression was compared with cognitive therapy (Kohlenberg, Kanter, Bolling, Parker, & Tsai, 2002). Findings indicated that FECT was incrementally beneficial compared to cognitive therapy. Additionally, FECT participants noticed improvements in their interpersonal relating compared to those in the cognitive therapy condition. A randomized trial compared FAP enhanced acceptance and commitment therapy to nicotine replacement therapy in facilitating smoking cessation (Gifford et al., 2008). While there were no differences at post-treatment, FAP enhanced ACT had significantly better outcomes at one year follow-up. A 2012 study compared FAP to supportive listening in an alternating treatments design (Maitland, 2012). Participants reported enhanced social relating and reduced overall psychological distress with greater therapeutic alliance and higher session ratings for the FAP sessions.

Other publications have focused on providing evidence of FAP’s mechanism of action. In order to do this, researchers developed the FAP Rating Scale to attempt to code CRBs in FAP sessions (Callaghan, 1998; Callaghan, & Follette, 2007). The FAP Rating Scale investigates therapist and client turns of speech and identifies them as CRBs, therapist responses to CRBs, or other behaviors. Researchers utilized this system in an A/A+B design to investigate the utilization of FAP techniques in a therapy session (Busch et al., 2009). Results gave support for FAP’s proposed mechanism of change. A
follow-up study found evidence that the FAPRS system is a reliable system for assessing therapist and client behavior (Busch, Callaghan, Kanter, Baruch, & Weeks, 2010). Busch et al. (2010) reported target behavior decreases and desirable behavior increases in session, which corresponded to improvements in day-to-day life. This research also indicated appropriate latency to responding to CRB, suggesting that immediate therapist responses were more potent than responses occurring after several turns of speech. Other research has found evidence that could potentially strengthen therapist contingent responding. FAP has been shown to enhance the therapeutic relationship above and beyond supportive listening (Maitland, 2012). This finding supports the idea that not only does FAP utilize the therapeutic relationship to shape behavior, but also strengthens that relationship.

The Mangabeira and colleagues review also highlights the variation of measurement tools in FAP studies. The meta-analysis suggested that the variety in the measures used is an artifact of the idiographic and functional nature of treatment; hence, most measures used focus on the target behavior instead the mechanism of action in FAP. Maitland and Gaynor (2012) recognized these factors influencing empirical investigation and suggested a line of research focusing on interpersonal relating in order to evaluate the efficacy and mechanism of action in FAP. It is noted that this suggestion is driven by many factors, which are reviewed below. First, interpersonal relating has been linked to most forms of psychopathology (Horowitz, 2004). One of the basic premises of FAP is that the therapeutic relationship shares functional similarities to client relationships outside of session. FAP suggests that problems that occur in the
client’s day-to-day relationships will occur in interactions with the therapist. The result of this is that the proposed mechanism of action can be applied directly to the behavior of interest. Second, assessment of interpersonal relating can be measured utilizing psychometrically evaluated measures, including measures of interpersonal relating in therapy for the therapeutic alliance (e.g. the Working Alliance Inventory (Horvath, & Greenburg, 1989). Utilizing these measures would allow researchers to investigate if a stronger therapeutic relationship mediates interpersonal change in client day-to-day life as would be predicted by the proposed mechanism of action in FAP. Third, measures of psychopathology could also be utilized to investigate the hypothesis that changes in interpersonal behavior mediate psychological functioning and determine whether treatment effects are moderated by clinical presentation. Given higher interpersonal functioning mediating psychological functioning, it would be expected that individuals experiencing change would evaluate their weeks as more enjoyable. Given these suggestions and the availability of measures on interpersonal relating, a next logical step would be to investigate the interpersonal foundations of psychopathology.

**Interpersonal Relating and Psychopathology**

Interpersonal relating may have a role in psychopathology, it has been asserted that “When we look at a domain of personality or its substrates in relation to psychopathology, our best bet may be to look at it in relation to interpersonal functioning” (Pincus, 2005, p. 294). While the experimental data supporting this investigation is lacking for some diagnosis, there is ample theoretical evidence to
warrant a more in depth examination (Horowitz, 2004). A number of diagnoses stand out as having more face validity than others, they are required in depth below.

**Depressive disorders**

Given the available diagnostic criteria, depression can be experienced many different ways. One line of research has investigated different vulnerabilities towards and experiences of depression related to dependent and self-critical vulnerabilities (Blatt & Zuroff, 1992). A dependent vulnerability to depression is one where interpersonal loss, loneliness, or sadness may act as a catalyst, whereas for a self-critical vulnerability, failure, self-criticism, and sadness are seemingly central causes. Research on dating couples found that self-critical women had negative views of the relationship resulting in negative thoughts and affects during interactions (Zuroff & Duncan, 1999). A separate study indicated that individuals identified as dependent were more likely to request and receive social support (Mongrain, Vettese, Shuster, & Kendal, 1998). Zuroff and Mongrain (1987) took individuals from the two identified groups and a control group and exposed them to rejection and failure conditions. After the rejection condition, dependent participants reported higher feelings of being neglected, unwanted, unloved, lonely, uncared for, and abandoned than the two other groups. This data leads advocates of the interpersonal approach to psychopathology to understand one path to depression as arising from loss, particularly from loss in relationships or impacts on respect. A review of studies on the role of loss in depression and comorbid diagnosis found that loss played a pivotal role in the etiology of depression and can modify the form, severity, and course (Sierra, Livianos, & Rojo, 2009).
There is also a significant amount of research indicating that interpersonal relating plays a central role not just as a vulnerability factor for depression, but is also impacted by a depression diagnosis. Those that warrant a diagnosis often show a marked disinterest in others (Horowitz, 2004) and a significant impact on pro-social, non-verbal behavior including eye-contact, response latency facial expressiveness, smiling, frowning, intonation, tearfulness, and movement of extremities (Kazdin, Sherick, Esveldt-Dawson, Rancurello, 1985). Other variables impacting interpersonal relating and correlated with depression include a decreased rate of speech (Segrin, 2001), a decrease in animation and lack of smiles (Rubinow & Post, 1992), as well as fewer gestures and head nods (Troisi & Moles, 1999). A number of verbal behavior characteristics are also correlated with depression including a lowered rate of speech, and increased amount of silent pauses (Pope, Blass, Siegman, & Raher, 1970). Furthermore, there is an apparent disinterest in connecting with others (Troisi, & Moles 1999) and lack of social skills (Segrin, 2001). While the causal relationship of these behaviors is not clear, if one looks at Ferster’s functional analysis of depression (1973) there is evidence that some of these behaviors could reduce potent sources of reinforcement from an individual’s life and consequently maintain depression.

**Social anxiety and generalized anxiety**

Interpersonal behavior is ingrained in the definition of Social Anxiety Disorder. A diagnosis of Social Anxiety Disorder (SAD) involves an unreasonable fear or anxiety related to social situations where perceived judgment is occurring. There is significant evidence that social anxiety has an impact on interpersonal relating (e.g. Wenzel, Graff-
Dolezal, Macho, & Brendle, 2005). One way this fear manifests is that individuals warranting a diagnosis of SAD tend to maintain a passive interpersonal stance (Oakman, Gifford, & Chlebowsky, 2003). Oftentimes SAD is characterized by avoidance of social situations due to fear of evaluation; though, at times social anxiety can be characterized by a dependent style of interpersonal relating (Darcy, Davila, & Beck, 2005). Clark and McManus (2002) concluded that increased self-focus related to interpersonal concerns impacts the ability to focus on social interactions.

Individuals diagnosed with SAD report a number of interpersonal problems in the domains of interpersonal warmth and interpersonal dominance (Oakman et al., 2003). Furthermore, individuals diagnosed with SAD have been shown to disclose less (Meleshko, & Alden, 1993) and engage in behaviors to prevent feared social outcomes including checking behavior to assess the likelihood of the feared outcome (Mennin, Heimberg, Turk, & Fresco, 2002). Research on Generalized Anxiety Disorder is not as prevalent. However given that anxiety is generalized, it is not unreasonable to conclude that persistent worry extends to and interferes with social interactions.

**Dependent personality disorder**

Dependent Personality Disorder is characterized by an individual’s submissive and clingy behavior in social interactions. Individuals who meet diagnostic criteria for this disorder have an overarching desire to be taken care of that leads to attachment to other individuals and fears of separation. The diagnostic criteria for Dependent Personality Disorder include meeting five of the eight following criteria (American Psychiatric Association, 2000): 1) Has difficulty making every day decisions without an
excessive amount of advice and reassurance from others. 2) Needs others to assume responsibility for most major areas of his or her life. 3) Has difficulty expressing disagreement with others because of fear of loss of support or approval. 4) Has difficulty initiating projects or doing things on his or her own due to lack of self-confidence. 5) Goes to excessive lengths to obtain nurturance and support from others, to the point of volunteering to do things that are unpleasant. 6) Feels uncomfortable or helpless when alone because of exaggerated fears of being unable to care for himself or herself. 7) Urgently seeks another relationship as a source of care and support when a close relationship ends. 8) Is unrealistically preoccupied with fears of being left to take care of himself or herself. Individuals diagnosed with Dependent Personality Disorder often have a high level of self-doubt (Horowitz, 2004). Often times these thoughts reach a point where the anxiety can hamper performance in social situations. Other prominent thoughts involve unrealistic outcomes to social failures.

**Avoidant personality disorder**

Like Dependent Personality Disorder and Social Anxiety Disorder, Avoidant Personality Disorder is social by definition. In order to reach diagnostic criteria for Avoidant Personality Disorder, individuals must meet four of the following seven criteria (American Psychiatric Association, 2000). 1) Avoids occupational activities that involve significant interpersonal contact because of fears of criticism, disapproval, or rejection. 2) Is unwilling to get involved with people unless certain of being liked. 3) Shows restraint within intimate relationships because off the fear of being shamed or ridiculed. 4) Is preoccupied with being criticized or rejected in social situations. 5) Is
inhibited in new interpersonal situations because of feelings of inadequacy. 6) Views self as socially inept, personally unappealing, or inferior to others. 7) Is unusually reluctant to take personal risks or to engage in any new activities because they may prove embarrassing. A number of cognitive patterns have been identified in those diagnosed with Avoidant Personality Disorder (Beck and Freeman, 1990). The identified cognition includes self-deprecating thoughts about the self, feeling as though others are constantly evaluating or going to reject the person diagnosed with Avoidant Personality Disorder. Unsurprisingly individuals who meet diagnostic criteria for this disorder are also prone to withdrawal and depression.

**Furthering Efficacy Research on Functional Analytic Psychotherapy**

Following the rationale outlined by Maitland and Gaynor (2012) and incorporating the interpersonal nature of the diagnoses mentioned above, a dependent variable in a systematic line of research on FAP is clearly suggested. The study suggested utilizes a FAP protocol to increase social intimacy/connectedness in those that meet criteria for Major Depressive Disorder, Social Anxiety Disorder, Generalized Anxiety Disorder, Avoidant Personality Disorder, and Dependent Personality Disorder. The line of research should utilize psychometrically evaluated measures to assess the therapeutic alliance, social functioning, and proximal symptoms related to the disorders. Maitland and Gaynor go on to suggest that the first comparison made in an RCT design should compare FAP to a watchful waiting group. The resulting study would provide evidence for FAP’s intrinsic hypotheses, that interpersonal relating and the therapeutic alliance would be evaluated as stronger in the FAP condition compared to the watchful
waiting group. Furthermore, the therapy relationship would be stronger in FAP and statistically mediate changes in interpersonal outcomes. However, as previously mentioned the specifics of FAP as an independent variable have been difficult to specify. Guidance on moving from a general treatment approach (following the five rules) to a research protocol that can be utilized across clinical trials has only been theoretically laid out (Weeks, Kanter, Bonow, Landes, & Busch, 2012; Maitland & Gaynor, 2012) and never utilized. A systematic approach to FAP as an independent variable must be utilized to accurately assess what is necessary and sufficient.

Maitland and Gaynor (2012) suggest four levels of FAP, which are modified versions of the levels suggested by Kohlenberg (2005, January 1). The levels of FAP are hierarchical in that an earlier level is contained in all later levels. These levels are detailed as logical implementation strategies for deriving what is necessary and sufficient for a FAP intervention.

Level One FAP consists of only following Rule 1: watch for clinically relevant behavior. It is suggested by Kohlenberg and Tsai (1991) that only Rule 1 is needed to conduct FAP. This suggestion is anchored in the idea that logically it is impossible to implement any of the other rules of FAP if one is not aware of clinically relevant behaviors. Theoretically a therapist who notices clinically relevant behaviors will respond in an effective way without needing the other rules. That is to say it is hypothesized that people who notice CRBs will automatically engage in Rule 3. Kohlenberg and Tsai (1991) suggest that just watching for CRBs will also create stronger emotional reactions of the therapist and client to each other during the session.
Level Two FAP deviates slightly from Kohlenberg’s suggested levels. Maitland and Gaynor’s level two FAP consists of the application of Rules 1-3 to CRB 1s and CRB 2s. In extending Level One FAP to include Rules 2-3, this level also urges researchers to explicitly evoke clinically relevant behavior and contingently respond to it. This level is suggested as much of the previous research has omitted a focus on CRB 3s and Rules 4-5 instead focusing on contingent responding to CRB 1s & 2s. Limiting the scope of this level allows incorporation of more evidence into the efficacy of FAP from a Level Two perspective.

Level Three FAP was conceptualized to address the concerns Weeks and colleagues (2012) voiced that the lack of empirical progress in FAP may be due in part to the lack of detailed guidance in applying FAP to specific interactions. Weeks and colleagues suggested a logical FAP interaction that involves a therapeutic exchange covering all five FAP rules in a sequence. The logical interaction approach provides a logical extension of Level Two FAP as it adds in CRB 3s and Rules 4-5. From a functional perspective, this adds to Level Two FAP a way to actively assess the function of therapist responses and explicit generalization to the client’s life outside of therapy through Rule 5 and CRB 3s.

Level Four FAP is consistent with Level 3 FAP outlined by Kohlenberg and represents a comprehensive manifestation of FAP including the five rules, three CRBs and a functional analysis to determine the focus of treatment. In addition to the conceptually comprehensive application of FAP, Level Four also integrates additive components that are not synonymous with FAP but found in the FAP literature (i.e. a
unique FAP relationship and using indirect methods of responding to client
improvements (Tsai et al., 2009)).

There are many ways that the FAP levels could be utilized to further the
evidence base for FAP. One such rationale would be to begin with Level Four based on
the rationale that utilizing a comprehensive protocol would provide the greatest odds of
seeing an effect. After the initial study, subsequent studies could be conducted assessing
the utility of the various components of FAP. This approach would ultimately provide
evidence for which aspects of FAP are necessary, which are sufficient, and which
ultimately contribute to better clinical outcomes.

**Summary and Statement of Purpose**

Given the current cultural importance of empirically supported and empirically
based treatments, it is crucial for researchers to continue developing and conducting
studies that facilitate promising therapies into those categories. FAP is a behavior
analytic approach to interpersonal psychotherapy that has shown promise in a number of
case studies. Due to issues surrounding the conceptualization of dependent variables
and the idiographic nature of FAP, research on FAP has been limited. Given the
proposed mechanism of action of FAP, and the plethora of assessment tools available, it
has been suggested that a research line focusing on interpersonal relating could facilitate
efficacy research on FAP. A number of diagnoses stand out as directly related to
interpersonal relating and are therefore favorable diagnoses to include in a line of
research assessing the efficacy of FAP on social connectedness. One suggested first step
in a line of efficacy research is to utilize a comprehensive FAP protocol compared to a
watchful waiting condition in order to maximize chances of results before systematically increasing the power of the control condition and assessing the components of FAP.

In the present study, 22 individuals, of either sex, who reported difficulties with social relating, met diagnostic criteria for a Major Depressive Disorder, Generalized Anxiety Disorder, Social Anxiety Disorder, Avoidant Personality Disorder, or Dependent Personality Disorder were given 6 sessions of FAP. Half of the participants in the study were asked to complete a watchful waiting control condition before receiving FAP. In the FAP therapy sessions, the therapist focused on the in-vivo behavior of the client, attempting to preempt or extinguish CRB 1s, while prompting and reinforcing CRB 2s and CRB 3s.

The following hypotheses were offered:

- A decrease will be found on measures of psychological symptoms and psychological distress from pretreatment to posttreatment; these results will differ significantly from the watchful waiting condition which will have no significant change.
- An increase in social intimacy will be noted pretreatment to posttreatment; these results will differ significantly from the watchful waiting condition which will have no significant change.
- A strong global therapeutic alliance will be established; the alliance in FAP will be significantly stronger than in the watchful waiting condition.
- FAP sessions will have occurrences of the five FAP rules.
• The weeks following the FAP sessions will be marked by greater interpersonal behavior change than the weeks following watchful waiting.

• The weeks following FAP sessions will be rated as more pleasant than the weeks following watchful waiting sessions.

• Change on the FIS will be mediated by the therapeutic relationship.

• Change on the PDSQ will be mediated by interpersonal functioning.

METHOD

Inclusion Criteria

In order to participate in the proposed study, potential participants had to score one standard deviation below the mean score for their gender on the Fear of Intimacy Scale (FIS) (Descutner & Thelen, 1991). Potential participants also had to meet diagnostic criteria for Major Depressive Disorder, Social Anxiety Disorder, or Generalized Anxiety Disorder as assessed by the Psychiatric Diagnostic Screening Questionnaire (PDSQ) (Zimmerman, & Mattia, 1999) and confirmed via the semi-structured follow-up interview, or meet criteria for Avoidant Personality Disorder, or Dependent Personality Disorder as assessed by the Structured Clinical Interview for DSM-IV TR (SCID-II) (First, Gibbon, Spitzer, Williams, & Benjamin, 1997). All inclusion criteria were covered by the informed consent document (Appendix C) which was presented prior to assessment of inclusion and exclusion criteria.

Exclusion Criteria

Potential participants who met diagnosis criterion for posttraumatic stress disorder, psychosis, substance dependence, or obsessive compulsive disorder on the
PDSQ and confirmed via the semi-structured follow-up interview were excluded from participation in the study. Additionally, if a potential participant presented as acutely suicidal, proper steps to ensure the wellbeing of the client were taken, and he or she was excluded from the study. Suicidality was initially assessed based on the PDSQ (items 16-21) and final determination was made during the PDSQ follow-up interview. Participants were not eligible for the study if they were seeing a separate psychotherapist during the course of the study or had started a new medication within the past six months.

**Treatment Integrity**

In order to confirm that the intended type of therapy was delivered, 33 sessions, 22 from FAP and 11 from WW were coded for adherence. The adherence measure included ten items, four related to WW that made up the WW subscale (i.e., frequency of attempting to understand the daily life social relationships from the client’s vantage point, frequency of engaging in reflective and empathic listening, frequency of prompts to discuss daily life social relations, and frequency of turning the focus to the client’s feelings/emotional reactions to events in their daily life) and five related to the FAP rules (i.e., frequency of turning the focus to in-session behavior, frequency of comparing in-session events to the participants daily life, frequency of prompts to engage in a particular response in session, frequency of sharing their reaction to the clients behavior, and frequency of checking to see the clients reaction to the therapists sharing his/her reaction) that made up the FAP subscale. Items 1-9 were scored 0 (did not occur), 1 (occurred once), 2 (occurred twice), or 3 (occurred three or more times).
The 10th item referred to the assignment of homework which was to be assigned in both session types and was scored 0 (did not occur), 1 (partial), or 2 (occurred). Homework in WW involved self-monitoring of emotions. FAP homework was designed to foster generalization and was to be assigned when an out of session parallel to in session behavior presented itself. Homework assignment was only able to be observed in 10/22 coded sessions (7/9 FAP [2 coded session were final sessions] and 3/9 WW [2 coded session were final sessions]). The 10th item coding data call into question protocol adherence with respect to homework assignment. In puzzling over this result, it was realized the therapist appeared to have developed a habit at the conclusion of sessions of saving video space by turning the camera off as he provided, especially the WW, participants with their post sessions measures. When the session evaluation measures were completed and put into sealed envelopes, the self-monitoring homework form was then presented; however, this could not be confirmed on camera. Using the logic that homework forms could not be completed and returned if they had not been assigned, to document adherence to homework assignment, returned homework forms were coded for every eligible session for both groups as either 0 (not returned), 1 (returned incomplete or partially completed), or 2 (returned in a substantial or fully completed fashion). Scores of 1 or 2 indicated that homework assignment occurred. Five homework forms constitutes the maximum for each participant as homework could not be collected after the final (6th) session (e.g., return of homework at session 6 confirmed assignment at session 5). Thus, with 11 participants in each group, the return of homework forms was coded for 55 sessions in each condition.
The adherence coder was a graduate student in clinical psychology. The coder had significant training and knowledge of FAP having been involved in research on the training of FAP therapists, participation in multiple FAP trainings, and completing graduate coursework on and practicum experiences using FAP.

**Therapists and Assessors**

The author, a graduate student in the Western Michigan University clinical psychology doctoral program, served as the primary therapist. The primary therapist has received training in FAP including an 8 session advanced training, and 4 weekend-long trainings conducted by experienced FAP clinicians and researchers. The author has served as a co-trainer at a FAP weekend-long training, completed a 200 hour practicum and has completed previous studies utilizing the same FAP protocol as the current study. Secondary therapists were also graduate students in the Western Michigan University clinical psychology doctoral program. They reviewed “A Guide to Functional Analytic Psychotherapy,” and received training on the FAP protocol; provided by the author. The majority of potential secondary therapists have attended a weekend-long FAP training and completed or are in the process of completing a 200 hour practicum. Assessors came from the same pool of individuals as secondary therapists. They were trained on how to administer the measures and interviews utilized in the study.

**Setting**

All therapy and assessment sessions were conducted within the Wood Hall 1504 suite on the Western Michigan University campus. Therapy rooms within the suite differ in size but each contains a table and two chairs. Suite rooms are decorated
sparingly, but may have interior decorations altered including the addition of artwork. Each therapy session was taped via a camera mounted on a tripod within the room for the purpose of future coding of the in session process.

Design

A between-group randomized clinical trial design comparing FAP to a watchful waiting control condition was utilized. Prior to treatment, individuals met with assessors whose only role in the study was to assess inclusion and exclusion criteria and go over the informed consent document. Assessment took approximately two hours and consisted of the individuals filling out questionnaires, as well as completing structured and semi-structured interviews. After the interviews, participants were asked to complete additional measures before being randomized into one of two conditions. Participants were randomized to 6 weekly FAP sessions of approximately one hour in length or into a watchful waiting condition. Individuals randomized to the watchful waiting condition were offered the FAP treatment after completion of the control condition. Participants who chose to accept this offer were assigned to either the primary therapist or one of the secondary therapists based on availability. After completing either the FAP or watchful waiting condition, participants were asked to attend a post-treatment assessment and a one-month follow-up session, each of these sessions lasted up to one hour.

FAP sessions (Appendix A)

The FAP condition focused on using therapist responses to reinforce and shape the behavior of the client. Throughout the 6 weekly sessions, the therapist contingently
responded to collaboratively identified clinically relevant behaviors as they appeared in session. Focus in the first two sessions was on orienting clients’ to FAP, establishing a strong therapeutic alliance, collaborative conceptualizing of CRBs, and discussing how in-session behaviors generalize to out-of-session behavior. By the third session, the therapeutic relationship was theoretically supposed to be relatively well formed and CRBs should have been well identified and evolving in their conceptualization. One potential CRB that often occurred during this phase of therapy is avoidance (Tsai et al., 2009). Avoidance in the therapy room might take the form of avoiding feelings that have been evoked through the therapeutic process. Not being in tune with one’s own experiences can hinder building intimacy, trust, and empathy with others and interfere with FAP’s proposed mechanism of action. Tsai and colleagues also encourage exploring what it means to avoid compared to moving forward and validating all that has been done toward the goal of personal growth. In addition, the therapist was instructed to keep an eye out for opportunities to complete a logical FAP interaction (Weeks et al., 2012). A logical FAP interaction begins with an out-to-in parallel based on therapist observation of a similarity between an outside problem and a CRB 1; this is then used to evoke and reinforce CRB 2s. The therapist then checks to see if his/her response was reinforcing, attempts to generalize, and then provides an in-to-out parallel. Special attention was also paid towards ending the therapeutic relationship at the conclusion of the study for each participant. Due to the fact that ending the relationship can share stimulus properties of other relationships ending, there is a unique opportunity to explore CRB 1s and CRB 2s related to the ending of past relationships. Participants
were asked to complete brief measures weekly to assess the effectiveness of sessions, the relationship with the therapist, and how he/she experienced the week. Participants were also asked to complete monitoring forms to track their interpersonal behavior, CRBs, and feelings (Appendix E) throughout the week. Upon completion of the 6 sessions, participants were asked to attend a post-treatment assessment and a one-month follow up session to assess progress made.

**Watchful waiting sessions**

Participants in the watchful waiting condition were asked to attend 6 weekly sessions to check in for ten to fifteen minutes and complete brief questionnaires to assess their week. The focus of the talk was on interpersonal distress and was framed as a time for the therapist to understand what the clients experience was like for the week. Participants were asked to complete monitoring forms to track their interpersonal behavior.

**Measures**

**Pre/post measures**

**FIS.** The FIS is a 35 item measure of self-disclosure, social intimacy, and social desirability. All items are scored on a 5-point Likert scale. The scores for the 231 member normative sample (116 men, 115 women) ranged from 40 to 132, with a mean score of 78.75 (men=81.9, women=76.10), and an average standard deviation of 21.82 (men=20.58, women = 22.61). The internal consistency of the scale was high $\alpha = .93$. Test-retest reliability of the FIS after a 1 month period ($r = .89$, $p<.001$) indicated high reliability. A follow up study conducted on an undergraduate population of 73 women
and 20 men, found scores ranging from 37 to 135, with a mean score of 75.78 (men=77.65, women = 75.27), and a standard deviation of 22.13 (men = 23.77, women = 21.80). Results from these studies suggest the FIS has strong psychometric properties as a measure of anxiety about close, dating relationships. The Fear of Intimacy Scale was administered pretreatment, post-treatment and follow-up and was used to assist in the conceptualization of CRBs.

**PDSQ.** The PDSQ is a 125 item self-report scale that screens for DSM-IV-TR Axis I disorders. Participants are asked to endorse if certain items apply to them or not within 13 diagnostic categories (Major Depressive Disorder, Bulimia, Post-Traumatic Stress Disorder, Panic Disorder, Agoraphobia, Social Phobia, Generalized Anxiety Disorder, Obsessive-Compulsive Disorder, Alcohol Abuse/Dependence, Drug Abuse/Dependence, Somatization Disorder, Hypochondriasis, and Psychosis). The majority of subscales have good to excellent internal consistency as measured by Cronbach’s alpha, Bulimia Nervosa \( \alpha = 0.91 \), Major Depression \( \alpha = 0.88 \), Dysthmic Disorder \( \alpha = 0.88 \), Posttraumatic Stress Disorder \( \alpha = 0.94 \), Obsessive-Compulsive Disorder \( \alpha = 0.83 \), Panic Disorder \( \alpha = 0.91 \), Mania/Hypomania \( \alpha = 0.76 \), Psychosis \( \alpha = 0.66 \), Agoraphobia \( \alpha = 0.90 \), Social Phobia \( \alpha = 0.93 \), Alcohol Abuse/Dependence \( \alpha = 0.87 \), Drug Abuse/Dependence \( \alpha = 0.89 \), Generalized Anxiety Disorder, \( \alpha = 0.89 \), Somatization Disorder \( \alpha = 0.66 \), Hypochondriasis \( \alpha = 0.85 \). Additionally all subscales showed significant convergent validity correlating significantly with independent scales assessing the same symptom domains. In addition to the questionnaire, a follow-up interview will be conducted for all diagnoses on which the participant reports a sufficient number of
endorsements to prompt the interview. The PDSQ was administered during pretreatment, post-treatment and follow-up.

**Interpersonal dependency inventory (IDI).** (Hirschfield et al., 1977) The IDI is a measure that assesses a participant’s emotional reliance of another person, lack of social confidence and assertion of autonomy. The measure requires participants to answer 48 items using a 4-point Likert scale. In a patient population, the three scales had split half reliabilities of .85, .84, and .91 respectively. Mean scores for a male distressed population for each scale were 47.9 (SD = 10), 34.8 (SD = 7.1), 31.3 (SD = 28.3). Mean scores for women were 49.4 (SD = 10.3), 33.9 (SD = 7.5), and 28.3 (SD = 6) (Hirschfeld et al., 1977). The IDI was administered at pretreatment, post-treatment and one month follow-up.

**SCID-II.** The SCID II is a diagnostic exam used to determine DSM-IV Axis II disorders. Participants filled out an initial questionnaire before receiving a structured interview. Questions on the questionnaire and the follow up interview pertained directly to diagnosis of Axis II disorders. Participants were asked to fill out only questions pertaining to Avoidant Personality Disorder and Dependent Personality Disorder. Likewise, the only follow-up interviews given were those corresponding to the same disorders if indicated in the questionnaire. The SCID-II was given at pretreatment, post-treatment and one month follow-up.

**Functional idiographic assessment template questionnaire (FIAT Q).** (Callaghan, 2001) The FIAT Q is a measure that specifies classes of behavior seen in interpersonally focused interventions. The questionnaire helps to identify problems that
are based on the function of behaviors as they affect the participant’s ability to form effective interpersonal relationships. The FIAT Q was used to assist in the identification of CRB during pretreatment and follow-up. The FIAT-Q shows good internal consistency (\(\alpha = .94\)) for the measure as a whole; the internal consistency for the subscales was lower (Scale A \(\alpha = .803\), Scale B \(\alpha = .757\), Scale C \(\alpha = .744\), Scale D \(\alpha = .800\), \(\alpha = .828\)). Mean scores for the FIAT-Q in a normative population are -48.72 (39.87) and -39.03 (50.55) at one month retest (Callaghan, Bonow, Darrow, & Follette, In Press). The FIAT-Q was given at pretreatment, post-treatment and one month follow-up.

**FAP intimacy scale (FAP-IS).** (Leonard et al., in press) The FAP-IS is a 14-item questionnaire that asks the participant to think of one person and evaluate various questions relating to intimacy on a 7-point Likert scale that runs from 0-6. The questions on the scale ask a person to think of an important relationship and answer questions related to interpersonal behaviors with that person. The scale is currently under development, and will be used primarily to aid in case conceptualization. It was administered at pretreatment, post-treatment and one month follow-up.

**Acceptance and action questionnaire 2 for FAP (AAQ-2 FAP).** The AAQ-2 FAP is a measure developed by Tsai & Kohlenberg (personal communication, July 9, 2012) to assess interpersonal avoidance. The questionnaire has been used in other studies currently in progress, but has no psychometric properties currently in the public domain. The AAQ-2 FAP was administered during pretreatment, post-treatment and follow-up.
**Personal style inventory (PSI).** (Robins et al., 1994) The PSI is a 40-item measure developed to assess sociotropy and autonomy as vulnerabilities of depression. In the present study, sociotropy and autonomy are viewed as measures of interpersonal functioning as it relates to depression. The sociotropy subscale assesses concerns about what others think, dependency, and pleasing others, the autonomy subscale assesses excessive perfectionism, need for control, and defensive separation from others. In a depressed population, both the sociotropy subscale ($\alpha = .88$) and autonomy subscale ($\alpha = .83$) reported high internal consistency. Internal consistency was slightly higher in control group (sociotropy ($\alpha = .90$), autonomy ($\alpha = .84$)). In a student sample (n=411), the PSI showed high internal consistency (sociotropy ($\alpha = .88$), autonomy ($\alpha = .86$) and a desirable correlation between the two subscales ($r = .18$). Test-retest stabilities were strong for a 5 to 13 week period (sociotropy = .8, autonomy = .7). Mean scores for each scale were reported at 95.8 (SD=15.9) for the sociotropy scale and 82.6 (15.1) for the autonomy scale. The PSI was administered at pretreatment, post-treatment and follow-up.

**Repeated measures**

**Outcome rating scale (ORS).** (Miller, Duncan, Brown, Sparks, & Claud, 2003) The outcome rating scale is a four item measure that requires participants mark on a 100 mm visual analog scale how they have been feeling in four domains (overall, individually, interpersonally, and socially). For this scale, a clinical sample (N=435) had a mean of 19.6 with a standard deviation of 8.7. The internal consistency was evaluated with a non-clinical sample and had a Cronbach’s alpha of .93, the test-retest
reliability was .66, .58, & .49, at the second, third, and fourth administrations. The somewhat low test-retest reliability is not unexpected due to the questionnaire having only four questions. Additionally, the metric is supposed to show change, consequently one should expect the scores to differ. Additionally, the ORS showed a sensitivity to change after psychotherapy, but not in the absence of psychotherapy. The ORS was administered at the beginning of every session.

**Session rating scale (SRS). (Duncan et al, 2003)** The SRS has participants place a hash mark on a 100 mm visual analog scale to indicate their evaluation of the session according to four categories: goals and topics, approach or method, and overall. The internal reliability using Cronbach’s alpha and a clinical sample (N = 70) was reported to be high, $\alpha = .88$. The correlation between the Helping Alliance Questionnaire II and the SRS was moderately high, $r = .64$. The SRS was administered at the end of every session.

**FAP session bridging form (FSBF). (Tsai, Kohlenberg, Kanter, Kohlenberg, Follette, & Callaghan, 2009)** The FSBF is a clinical tool found in Tsai et al’s text “A Guide to Functional Analytic Psychotherapy”. Question 2a, b, c, and d will be used to assist in measuring intimacy within the therapeutic relationship. The FSBF was administered at the end of every session.

**Working alliance inventory short form (WAI-SF). (Tracey, & Kokotovic, 1989)** The WAI-SF is a 12-item paper and pencil instrument designed to measure variables surrounding the working relationship in therapy. Developers took the 4 highest loading items from the four subscales of the Working Alliance Inventory (Horvath & Greenberg,
1989) and used them to create a shorter version. Through a series of experiments, the WAI-SF was discovered to have an estimated reliability of $\alpha=.93$. Later studies found that there is evidence that the Working Alliance Inventory and WAI-SF can be used interchangeably (Busseri, & Tyler, 2003). The WAI-SF was administered at the end of every session.

**Clinical tools**

*FAP case conceptualization form.* (Kohlenberg, 2005) The FAP Case Conceptualization Form is a form that outlines relevant history, daily life problems, in-vivo problems, in-vivo improvements, and daily life goals. The conceptualization form is an organizational tool that will be used to outline case conceptualization surrounding CRB with participants. Participants completed the form collaboratively with the therapist during the first therapy session.

*Frequency of interpersonal behaviors scale (FIBS).* (Weeks, 2014) The FIBS is a tool to track broad classes of interpersonal behaviors, specifically focused on a meaningful relationships. The participant tracks seven different broad behaviors, and tallies the number of occurrence for each day. The participant then explains examples of that behavior from the week. The FIBS was given out as homework every session.

**Participants**

Participants were recruited based on self-identification of difficulties with social relationships and experiencing distress. Recruiting efforts consisted of posting flyers around Western Michigan University’s campus, announcements in undergraduate psychology courses (Appendix D), and postings on community websites. Potential
participants were instructed to contact the lead researcher, who then scheduled an
assessment session to screen for inclusion and exclusion criteria.

Fifty-two potential participants were screened, of those 22 did not meet inclusion
criteria, seven were excluded, and 23 qualified for the study. Eleven of the participants
were randomized to the watchful waiting condition and 12 were randomized to the FAP
condition. One participant dropped out of the FAP condition after attending one session,
missing three weeks then attending a second session. This participant was hesitant about
study participation from the start, electing not to not provide demographic information at
intake, and given the minimal and intermittent treatment contact was excluded from data
analysis. The other 22 participants completed all six sessions of the condition to which
they were randomized and a post treatment assessment session.

In the FAP condition, the participants had an average age of 20 (M=20.27,
SD=2.90). The majority of the participants in the FAP condition were freshmen (5) or
sophomores (5), the other participant was a graduate student. Six of the participants
were male, five were female. All 11 of the participants indicated being full time
students; they represented nine different programs. Grade point averages for the
participants ranged from 2.5-3.8 (M=3.26, SD=.56); two participants had not yet
received college grades. Two of the 11 participants indicated having a Hispanic or
Latino background. Eight indicated being White, two African American, and one
indicated being multi-racial. Two of the participants were employed full time, seven
were employed part time, and two were not employed. None of the participants were
currently in treatment, though five had a history of treatment. The focus of the historical
treatment was diverse in nature; one participant was treated for ADHD, one for anxiety, one for depression, one for depression and anxiety, and one for generalized anxiety, major depression, PTSD, and panic attacks with agoraphobia. Two of the participants indicated that they were currently taking medications, one took 20mg of Adderall 5 days a week and one took 1mg of Ativan as needed, both had been on medication for more than 6 months. Three participants indicated a history of medications. Participants reported drinking an average of two drinks per week (M=2.45, SD=5.32) and three uses of tobacco a week (M=3.27, SD=10.21). None of the participants had a history of substance treatment. Diagnostically, three of the participants met criteria for Major Depressive Disorder, nine met criteria for Social Anxiety Disorder, six met criteria for Generalized Anxiety Disorder, and eight met criteria for Avoidant Personality Disorder.

In the watchful waiting condition the average participant was 21 (M=21.45, SD=3.725). Four of the participants were freshmen, two were sophomores, three juniors, and two were seniors. Five of the participants were male, six were female. The participants represented 11 different majors with GPAs ranging from 2.00 to 3.99 (M= 3.08, SD=.72). Ten of the participants attended school full time, one attended school part time. One of the participants indicated having a Hispanic/Latino identity, nine indicated they did not, and one participant elected not to disclose their identity in this capacity. Ten of the participants identified as being White, one identified being more than one race. With regards to employment, one of the participants worked full time, three worked part time, and six indicated not currently being employed. Four of the participants had received psychotherapy in the past. One participant received treatment
for depression, two for depression and anxiety and one for excessive guilt. One participant was currently prescribed .25 mg of Xanax, the initial prescription was given 3 years ago. No other participants indicated any current medication though two participants indicated a history of medication. Participants in the watchful waiting condition had an average of five drinks per week (M=5.23, SD=9.331), had no history of substance treatment and reported two uses of tobacco a week (M=2.18, SD=3.82). Diagnostically one participant met criteria for MDD, one for binge eating disorder, one for panic disorder, one for agoraphobia, eight for social anxiety, five for generalized anxiety, and two for Avoidant Personality Disorder. A summary of demographic characteristics of each condition can be found in Table 1.

**Table 1** Sample demographic characteristics

<table>
<thead>
<tr>
<th></th>
<th>FAP</th>
<th>WW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>20.27(2.901)</td>
<td>21.45 (3.73)</td>
</tr>
<tr>
<td>Gender</td>
<td>Male: 6 , Female: 5</td>
<td>Male: 5, Female: 6</td>
</tr>
<tr>
<td>Hispanic</td>
<td>Yes: 2 , No: 9</td>
<td>Yes: 1, No: 9</td>
</tr>
<tr>
<td>Race</td>
<td>White: 8 , African American: 2 , Multiracial: 1</td>
<td>White: 10, Multiracial: 1</td>
</tr>
<tr>
<td>Number of drinks a week</td>
<td>2.45 (5.31)</td>
<td>5.23 (9.33)</td>
</tr>
<tr>
<td>Number of tobacco uses a week</td>
<td>3.27 (10.21)</td>
<td>2.18 (3.82)</td>
</tr>
<tr>
<td>Number of diagnoses at pre-treatment</td>
<td>One: 4 , Two: 4 , Three: 3</td>
<td>One: 5, Two: 4, Three: 2</td>
</tr>
</tbody>
</table>
Table 1 – continued

<table>
<thead>
<tr>
<th></th>
<th>Frosh: 5, Junior: 5, Grad student: 1</th>
<th>Frosh: 4, Soph: 2, Junior: 3, Senior: 2</th>
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</thead>
<tbody>
<tr>
<td>Year in school</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full time status</td>
<td>Full time: 11</td>
<td>Full time: 10, Part time: 1</td>
</tr>
<tr>
<td>GPA</td>
<td>3.26 (.52)</td>
<td>3.08 (.72)</td>
</tr>
<tr>
<td>Employment status</td>
<td>Full time: 2, Part time: 7, None: 2</td>
<td>Full time: 1, Part time: 3, Not: 6</td>
</tr>
<tr>
<td>History of treatment</td>
<td>Yes: 5, No: 6</td>
<td>Yes: 4, No: 7</td>
</tr>
<tr>
<td>Currently on meds</td>
<td>Yes: 2, No: 8</td>
<td>Yes: 1, No: 10</td>
</tr>
<tr>
<td>History of meds</td>
<td>Yes: 3, No: 8</td>
<td>Yes: 2, No: 9</td>
</tr>
</tbody>
</table>

RESULTS

Twenty five percent of the 132 total sessions (66 FAP and 66 WW) were coded for adherence. These 33 sessions were coded for (a) the presence of the supportive, non-directive elements of treatment – the 4 items forming the supportive listening subscale and (b) the application of the FAP rules – the 5 items comprising the FAP subscale. The coded sessions were selected at random (without replacement) to yield 11 WW sessions (1 for each WW participant), and 22 FAP sessions (2 unique sessions for each FAP participant). Of the FAP sessions, 11 were coded in full (i.e., the full 50 minute session) and for 11 only the first 15 minutes were coded. The latter was done to yield a direct comparison with the coded WW sessions that were designed to last about 15 minutes.
On the supportive listening subscale, there was no mean difference between WW ($M = 2.77$, $SD = 0.24$) and full FAP ($M = 2.82$, $SD = 0.32$) sessions, $t(20) = -0.38$, $p = .71$. When the WW mean was compared to the first 15 minutes of FAP sessions ($M = 2.43$, $SD = 0.55$) a trend toward significance emerged favoring WW, $t(20) = 1.89$, $p = .08$. On the FAP subscale, there was a statistically significant mean difference between WW ($M = 0.16$, $SD = 0.54$) and full FAP ($M = 1.71$, $SD = 0.79$) sessions, $t(20) = -5.34$, $p < .001$. Similarly, when the WW mean was compared to the first 15 minutes of FAP sessions ($M = 0.78$, $SD = 0.61$), the was also a statistically significant difference, $t(20) = -2.51$, $p = .02$. Thus, while both conditions provided client-centered engagement, the FAP sessions were unique in their \textit{in vivo} focus, the distinctive element of FAP.

By coding the return of homework forms, homework assignment was able to be documented in 32/55 (58\%) of FAP sessions and 48/55 (87\%) of WW sessions. For both FAP and WW 29/55 (53\%) of codes indicated substantial-full completion of the assigned homework. The groups differed on partial completion, which represented 3/55 (3\%) in FAP and 19/55 (35\%) in WW. The critical aspect of these data is their suggestion of strong therapist adherence to the assigning of homework in WW, one of the critical variables for which WW provided a control.

Initial analysis of the differences between conditions at pre-treatment utilizing an independent samples t-test suggested that there were no significant differences between the groups on any outcome measure. Means, SDs, and between group differences at pre-treatment are summarized in Table 1.
Evaluation of treatment effects was initially carried out utilizing a 2x2 repeated measures ANOVA seen in Table 2. Further analysis was carried out utilizing an ANCOVA to control for the variance at pre-treatment (Table 3). The results of the repeated measures ANOVA found a significant time by treatment effect on the total number of self-reported psychiatric symptoms on the PDSQ \( (F(1, 20) = 4.99, p = .037) \), as well as results trending towards significance on the FIS \( (F(1, 20) = 3.33, p = .083) \). The results of the ANCOVA were also significant for the PDSQ total number of self-reported psychiatric symptoms \( (F(1,19) = 7.09 p = .015) \), and FIS \( (F(1,19) = 4.70, p = .043) \). From a diagnostic perspective, both a repeated measure ANOVA \( (F(1,20) = 7.83, p = .011) \) and analysis using an ANCOVA \( (F(1,19) = 8.81, p = .008) \) found a significant differential reduction in the number of PDSQ diagnoses in the FAP condition (Pre \( M \) number of diagnoses = [1.91, SD = .83], Post \( M \) number of diagnoses = [0.18, SD = .40]) compared to WW (Pre \( M \) number of diagnoses = [1.73, SD = .79], Post \( M \) number of diagnoses = [1.09, SD = 1.04]).

**Table 2** t-test means, SDs, and pre-treatment between group differences

<table>
<thead>
<tr>
<th>Condition</th>
<th>Mean (SD)</th>
<th>Pre-Tx differences</th>
<th><strong>t-test</strong></th>
<th><strong>p</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>AAQ2 FAP</td>
<td>AAQ2 FAP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FAP</td>
<td>42.09 (11.30)</td>
<td>35.64 (13.16)</td>
<td>0.53</td>
<td>0.602</td>
</tr>
<tr>
<td>WW</td>
<td>39.82 (8.66)</td>
<td>40.45 (7.33)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IDI</td>
<td>IDI</td>
<td></td>
<td></td>
<td></td>
</tr>
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Table 3 2x2 repeated measures ANOVA

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### Table 4 ANCOVA results

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Assessment of differences in the therapeutic relationship were carried out utilizing a 6x2 repeated measure ANOVA. Results of the test on the WAI \( (F(5, 100) = 10.98, p < .001) \), FSBF question 1 \( (F(5, 100) = 10.10, p < .001) \), and FSBF question 2 \( (F(5, 100) = 9.72, p < .001) \) indicated a significant treatment by time interaction favoring FAP. Similarly, a 6x2 ANOVA was used on the ORS to analyze the participant’s evaluation of the week prior to each session and on the SRS to assess the participant’s evaluation of each therapy session. Results on the ORS Overall item were trending towards a significant time by condition interaction \( (F(5, 100) = 1.936, p = .095) \).

Results on the SRS indicated no significant effects \( (F(5, 100) = 1.441, p = .216) \). Results on the ORS Interpersonal \( (F(5, 100) = 1.058, p = .388) \) and Social \( (F(5, 100) = 1.046, p = .395) \) subscales were found to be insignificant.

Given the findings of significant group difference on the WAI, FSBF, FIS, and PDSQ, it was possible to examine whether the WAI and FSBF mediated changes on the FIS. Tests for mediation were conducted using the bootstrapping method of Preacher and Hayes (2008). Residualized change scores were used for the FIS, Residual change scores were calculated by utilizing termination scores, regressed on intake scores. The WAI and FSBF were used as proxy variables in a mediation analysis on the FIS under the rationale that the proposed mechanism of action in FAP is implicitly captured in the

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alliance but that the alliance is not the actual mediator (Maitland & Gaynor, 2012). The WAI and FSBF session by session data and the overall mean of each were used as possible mediators. The test of mediation examines the significance of the indirect path (treatment --> WAI --> FIS change) compared to the direct path (treatment --> FIS). A significant point estimate with a 95% bias corrected and accelerated bootstrap confidence interval that does not include zero indicates that the difference between the indirect and the direct effect of treatment condition on FIS change was different from zero, suggesting mediation. Results showed a significant mediation effect by the WAI Overall in sessions 1, 2, 5, and 6 as well as by the participant’s highest session evaluation on the WAI and Mean WAI score. There was no significant mediation effect based on how the therapeutic alliance was changing (WAI slope). No findings on the FSBF were found to be significant for any session with any item, mean scores for both questions analyzed are presented to reflect these findings (Table 5).

Table 5 Bootstrapped point estimates and confidence intervals of the indirect effects of process variables on the FIS

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Table 5 – continued

| Question 2 FSBF mean | -0.0414 | -0.2936 | 0.2166 |

Note: Number of bootstrap resamples = 10,000. The indirect effect is statistically significant at the $p < .05$ level when the confidence interval does not include zero. CI, confidence interval. Bootstrap distribution is adjusted for bias.

**DISCUSSION**

The present study compared FAP to a watchful waiting condition in a randomized clinical trial and provides evidence supporting a number of our initial hypotheses. Utilizing measures of psychological symptoms, social relating, the therapeutic alliance, and weekly evaluations, the current study investigated the efficacy of FAP and explored process variables related to FAP’s proposed mechanism of action. Consistent with predictions based on previous findings (Maitland, 2012), the FAP condition produced significant reduction of psychological symptoms and distress on one measure that was used in previous studies and was trending towards significance on a number of other measures that were utilized based on theoretical predictions compared to the watchful waiting condition. Likewise, the FAP condition significantly increased social relating compared to the control group based on the FIS. The changes in psychological and social functioning took place within the context of a therapeutic alliance that compared favorably to the therapeutic alliance established during watchful waiting as indicated by results on the WAI. While the findings were not significant, the results of the ORS suggest that with an increased sample size there may be evidence for a time by condition interaction effect that would be indicative of significantly better
weeks over time for those in the FAP condition compared to those in a control condition. While the evidence suggests that FAP was differentially beneficial, it is worth noting that most participants did indicate some beneficial results from participation in the study regardless of treatment group.

While not a direct measurement of therapist contingent responding, the WAI provides an adequate proxy variable to provide evidence for the proposed mechanism of action in FAP. The mediation analysis conducted investigated if changes in the FIS were related to different aspects of the WAI. The first set of analyses investigated if the WAI at each session significantly mediated outcomes on the FIS. These findings indicated a significant mediation effect in sessions 1, 2, 5, and 6 within a 95% confidence interval and trending results on sessions 3 and 4 within the same interval. Despite finding a mediation effect, the aforementioned findings were unsatisfactory, as they did not adequately map onto FAP’s theoretical framework. The next mediation analysis that was conducted investigated the slope of the change in the therapeutic relationship mediated post treatment scores on the FIS. Statistical analysis suggested that the slope of change on the WAI did not mediate the change. This finding is consistent with the FAP framework, as it is not thought that improvements or changes in the relationship is a mechanism of action so much as a bi-product of that mechanism of action. The next two analyses focused on different levels of WAI. When participants mean scores on the WAI were assessed as a potential mediator, results robustly indicated that they mediated the outcome. Likewise, when participants peak score on the WAI was assessed, it too was found to mediate treatment outcomes. Of particular interest is
that FSBF questions did not fill a mediational role when they were plugged into the statistical model. FSBF question one asks about the helpfulness/effectiveness of the session. The failure of responses on this question to mediate results suggests that the mediational findings on the WAI are more than participants believing sessions are useful. FSBF question two asks about how connected you felt to your therapist. The failure of FSBF question two to mediate results, suggests that the WAI mediational results are also more than just feeling close to the therapist. The findings of the WAI mediational analysis and FSBF mediational analysis are consistent with FAP’s theoretical model; a conservative interpretation of these results would conclude that these findings are necessary but not sufficient evidence of FAP’s mechanism of action.

A separate mediation analysis investigated the role of social functioning in psychological symptoms and distress. While the results did not suggest a significant mediation, results were beginning to trend in a way that suggests changes on the FIS could mediate changes in psychological symptoms and distress. This finding would be consistent with the interpersonal model of psychological distress and if found in a study where in session relating mediated changes in social relating could provide support for the therapist facilitating generalization to the participants day-to-day life (FAP rule 5) as a mechanism of action.

**Future Direction**

In following the line of research laid out by Maitland and Gaynor (2012), a number of future directions are suggested. While the mediation analysis in the present study provides some evidence supporting the idea of therapist contingent responding
functioning as FAP’s mechanism of action, a more detailed investigation is needed. Post hoc coding utilizing the FAPRS (Callaghan, 1998) could be used to examine session recordings from the current study to provide a stronger mediation variable that maps directly onto the FAP conceptual framework. Similarly, future studies looking to provide evidence for FAP’s mechanism of action could assess the primary dependent variable (in the present study, social relating) more frequently. By redistributing response cost away from proxy process variables completed during each session and instead focusing on coding and the main outcome variable, a stronger case can be made for the temporal precedents of the mechanism of action in FAP.

A divergent line of research exploring more macro issues in FAP is also suggested. The present study established that FAP can be an effective treatment for social relating in a brief intervention. However, the control condition in the present study represented a minimal control condition. Future studies can systematically increase the strength of the control condition, beginning with a supportive listening condition lasting an equivalent amount of time as the FAP condition and then progressing to other evidence-based treatments. This line of research would provide evidence for the differential efficacy of FAP. An investigation into what components of FAP are necessary and sufficient is also called for. By reducing the level of FAP that is administered, researchers can assess what components are necessary to engage FAP’s mechanism of action and what components produce additive effects.

**Limitations**
A number of methodological limitations were present during the present study. One therapist carried out the majority of the therapy (21/22 participants). While the limited number of therapists does not diminish the differential impact of the treatment, it does limit the generalizability of the findings. Further analysis on adherence measures is required to assess if FAP was actually delivered. The long-term efficacy of the treatment condition also needs to be established. The current study presents data from pre-treatment to post-treatment. Data collection also occurs one month following treatment, but the effects of the intervention over an extended period of time is an important variable to be assessed. As mentioned previously, it is important to establish the occurrence of FAP’s proposed mechanism of action before change occurred to conclude if mediation occurred. The present study cannot conclude a causal relationship between the WAI and change on the FIS. The current analysis suggests that the WAI measures an important variable of functional importance but a more rigorous analysis involving measurement of session by session improvements and a detailed investigation of the occurrence of therapist contingent responding utilizing a tool such as the FAPRS is needed to conclude that FAP’s proposed mechanism of action mediates change. Lastly, it is important to note that all measures on this study were self-reported. While the therapist in the FAP condition did actively attempt to generalize behavior from in session to out of session, knowledge of outside of session behaviors relied on the participant to complete homework and report back to the therapist. A number of participants did not return the homework or declined to take the homework with them at
the conclusion of a session. As such, conclusions about behavior that occurred outside of session are difficult to make.

In conclusion, the present study supports the utility of FAP as a brief intervention for enhancing social relating for college students that meet diagnostic criteria for disorders with strong interpersonal components. The findings suggest that a six-session FAP protocol can reduce psychological distress, differentially impact the therapeutic relationship, and increase social functioning. Findings also provided support for FAP’s mechanism of action. Data suggested that the therapeutic relationship mediated changes in social relating. These findings are consistent with the theoretical underpinnings of FAP. The present study represents the first randomized clinical trial using a FAP or FAP enhanced protocol.
Appendix A

Treatment Protocol
Supportive Therapy - therapist protocol

Background

The focus in the SL condition (influenced by early session material described in Greenberg, Rice, & Elliott, 1993, pgs 99-111) 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 experiences directly. Psychoeducation emphasized the untoward effects of not acknowledging feelings and that by identifying and talking about feelings one can come to better understand him/herself and to develop his/her 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 seeking clarification. Therapists were instructed not to offer solutions, make interpretations, provide expert reassurance, or disagree with/confront the client. Participants were asked to do “awareness homework,” which involved monitoring the presence, intensity, and duration of emotions with no prescription to change or do anything differently.


SL didactic training involved reading and discussing Greenberg et al. (1993), a partial transcript of Carl Rogers conducting an initial session (from Corsini & Wedding, 2005), and watching and discussing Rogers interview with “Gloria” (i.e., Psychological & Educational Films, 1981). After the didactic trainings, therapists role-played with one of the authors using each of the therapy protocols. Additionally, the first author viewed the therapists’ first participant videotapes and provided feedback.

Supportive therapy rests on the notion that unpunished expression of negative thoughts/experiences in the context of a warm empathically-attuned therapeutic relationship is in-and-of-itself helpful. Furthermore, some recent 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).

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 monitor 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 of emotions.

- Therapist Objective:
  - Empathic attunement – attempt to understand the world from client’s vantage point.
Therapist behaviors to engage in:
- 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?
- Empathic Reflective listening – re-statements of what client said to reveal your understanding, especially reflection of immediate client feelings or 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 he/she used.
  - Inviting client to correct you or clarify your understanding
    - Does that fit?
    - Was that what it was like?
- Communicating/expressing genuine empathy and interest –
  - Uh-huhs, Mmm-hmmms
  - Head nods, smiling, frowning (as appropriate to content)
  - Affirmations -- “Yes, I understand”, “I can sense how difficult that was…” “I see how painful that is…”
- Clarifying (emotional) questions – designed to help client tell his/her story and contact emotions, not designed 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…
  - 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
  - Making interpretations
    - Do not attempt to explain 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
  - 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 50 minutes I can begin to get to know you 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 can, if needed, ask
    
    - Open ended questions using information from assessment material that is available to therapist
      - 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 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 than 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.
  - Possible additions to the diary card assigned every session are shown below
Identify 3 feelings/emotions you’ve experienced today. There is no right or wrong answer and no emotion is too big or too small. Sometimes more than one emotion emerges; in these cases identify all the emotions that were present.

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Feeling(s)/Emotion(s)</th>
<th>Highest intensity of each emotion (1-10)</th>
<th>Relevant Event(s) – Recent or In Past</th>
<th>Describe any changes in your feelings with time, how long they lasted, or any other relevant observations</th>
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### Alternative Awareness Homework Assignment

- Use in Sessions 1-3 or Sessions 4-6 (as determined by therapist)
- Rationale: Moods go up and down throughout the day. 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
  - 5 - neutral
  - 4
  - 3
  - 2
  - 1 – feeling deeply distressed

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Focused Awareness homework (used in second half of protocol as determined by therapist)

- 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 (rather than to all emotional experiences). For example, if salient topic has been how the 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 SL 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.

**Functional Analytic Psychotherapy Protocol**

FAP works to bring problematic behavior into the therapy session. This is done by collaboratively identifying clinically relevant behaviors and then attending to them in-vivo when they occur in session.

*Purpose:* Help participants work past social difficulties through in vivo shaping of behavior.

**Conducting the sessions**

All sessions will begin with reviewing behavior that was tracked in the previous week.

- First session and second session
  - Foster a sense of trust and safety through empathy, warmth, reflective listening, and validation
• Be mindful of behaviors such as the participant showing up on time, disclosing important personal information, paying attention to and responding to questions, demonstrating caring and concern over therapist feelings and being engaged in the session
• Be forthcoming w/ own thoughts, reactions and observations about the participant. That is to say, do not hide behind the therapist persona.
• Be mindful of the relationship that is being built. At minimum this will be session 4. It is not unlikely that the therapist feels the therapeutic relationship as a real relationship before the participants do. Avoiding forming a relationship could be a form of CRB1

Specific behaviors that are encouraged to occur
• Encourage the participant to ask questions such as what are your questions about me, my training, my background? And what do you seek most in therapy?
• Encourage the participant to voice their reactions to the therapist. E.G. what reactions do you have to my gender, age, and ethnicity?
• Encourage the participant to voice their feelings related to the appointment. E.G. What are your thoughts and feelings about having this appointment today, or what would make this a really good session for you?
• Ask about expectations and correct the participant if they’re not accurate.
• Ask how the participant typically begins a new relationship (jump in quickly? Move cautiously? Feel shy and keep to yourself? Quick to be critical about what’s going on?)
• How is beginning this relationship different than your typical relationships?
• What can you do to increase the likelihood of you having a good experience and getting what you want from therapy?
• How would therapy work better for you?
• What else is important for me to know that will be helpful in working with you?
• Offer space for any other feedback.

Sessions 3,4 (middle phase of therapy)
• Therapeutic relationship should be relatively well formed by this point
• CRB’s occurring in session are probably those that occur in ongoing relationships in the participants daily life.
• The focus on trust, safety and contingent reinforcement should begin to focus on behaviors that are relevant to the participants goals.
• Reinforcing successive approximations to the targeted behaviors the participant wants in their repertoire should be occurring.
• Case conceptualization should be evolving as the participant improves and therapist responding should adjust as such.
• Focus on reinforcing any appropriate behaviors that were acquired earlier in treatment
• Focus on avoidance
  o The participant may work hard to view the therapist as a professional instead of a person
  o The participant may be working to avoid truly feeling whatever there is to feel in a given moment
  o Emotional experience isn’t necessarily interpersonal, however experiencing the emotion fully with no guards up is.
  o Explore what it means to avoid verses move forward, and validate what has already been done (you’ve grown a ton, but we’re not quite at where you want to be)
  o Don’t underestimate how hard it is for the individual to contact pain, loss and grief.

Specific behaviors that are encouraged to occur
• Ask what progress the participant has made that they are most excited about
• Ask where the participant would like to continue to make progress
• Ask areas where the participant is having difficulties expressing themselves.
• Have the participant share something they want you to know
• Ask what would be difficult for the participant to face
• Ask what the participant would like to change about therapy
• Ask how the relationship could be improved between the therapist and participant
• Ask ways that the participant has a difficulty expressing themselves
• Ask what about you bothers the participant
• Ask the participant what your reactions remind them of
• Ask the participant what they would like to spend more time on
• Ask what about the therapy is hard for the participant to accept
• Ask how the participant has changed since therapy
• Ask what is getting easier for the participant to do
• Ask what behaviors if any the participant was able to do for the first time
• Ask for examples from the participant of when you were insensitive
• Ask when it is difficult for the participant to manage their feelings in therapy
• Ask when or if the participant has ever had a dramatic, intense, or seemingly inappropriate to you.
• Ask when the participant has felt closest to you
• Ask when the participant is most likely to push you away
• Ask what the therapist does or how they feel after a session
• Ask what is difficult about session for the participant

Last session, session 5
• Termination should be viewed as an opportunity to help the client build a new repertoire for loss and endings.
• Invite a conversation about termination and how that affects you and acknowledge the mutual impact on each other’s lives.
• Bring up similarities to other instances of transitions and losses and how that is like termination of therapy
• This is a time to consolidate gains and ensure that the positive interactions have generalized.
• Model how a relationship can end positively, with meaning and feeling
• Client should have a clear sense of the ways in which they are special and clarity about what they have to contribute to the relationships in their lives, communities and the world

Specific behaviors that are encouraged to occur
• Ask what has been learned, and how therapy has been helpful
• Ask what the participant has become aware of about themselves, that they weren’t aware of before
• Ask what skills have been learned that they want to keep implementing in their lives
• Ask what they like and appreciate about themselves, and what they are greatful for in their lives
The techniques listed above are meant to create natural segues to clinically relevant behavior. It is likely that this behavior will be evoked through review of homework, discussed anecdotally through conversation or occur naturally through interactions with the therapist. When clinically relevant behavior is “in the room” the therapist should strive to complete a logical FAP interaction (Weeks et al., in progress) starting where appropriate, as outlined with techniques below based off of that article.

1. Discuss FIBS behaviors in general – basic review of previous weeks’ data.

2. Out-to-in Parallel
   - Does that ever happen in here?
   - Is that the same as when you and I have a disagreement?
   - Do I make you feel that way as well.
   - Do you see me as similar to your partner?
     - If client does not report any of the same feelings with the experimenter discuss how things are different during the study sessions and how the client can arrange for outside relationships to be more like therapy.

3. Evoke FIBS behaviors in-vivo
   - Are you feeling that way right now?
   - Given there is this parallel between what happens with your partner and what happens with me, is there anything you can do differently with me?
   - Right now? Can you do something different?

4. Block & Evoke FIBS Behaviors
   - Block avoidance behaviors (such as changing the topic) even if it means being aversive to the client.
     - Need to assess for effect
     - Block sensitively
- Think in terms of shaping.
  - No? How about if you asked me for something?
  - No? I’m sure there must be something…
  - How about if you think about it for a minute?
  - This may be difficult, but I’d like to push you a little here. I’m sure you can come up with something.

5. Reinforce desired FIBS behaviors.
  - I’d be happy to do that for you (give client what he/she wants)
  - That really helps me feel closer, more connected to you
  - Knowing that brings up tender feelings for you
    - Amplify feelings
  - Do nothing (but do it well)
    - Become present

6. Assess effect on client
  - Don’t rush into this, it could be your avoidance!
  - How was that for you?
  - When I responded to you in that way, how did you feel?
  - Do you think my response made it more likely for you to do what you did again, or less likely?

7. Functional Description
  - I think this is important, so I just want to point out what just happened…You were upset that I am going out of town, you asked me for something, I responded positively, and now you feel better, is that right?
  - Antecedent…behavior…consequence
  - Help client generate the functional description

8. In-to-out Parallel
  - Let’s go back to where we started. You said that this situation was similar to what happens with your partner?
  - What if you tried what you just did with me with your partner?
  - Is it possible he/she would respond positively as well?
Appendix B

Treatment Adherence
To what extent was the therapist’s behavior mainly directed toward attempts to understand the daily life social relationships from the client’s vantage point?

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Did the therapist engage in reflective and empathic listening in reaction to the client?

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Did the therapist prompt/encourage the client to discuss daily life social relations?

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Did the therapist turn the focus of the session on the client’s feelings/emotional reactions to events in his/her daily life social relations?

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Did the therapist turn the focus of the session on the client’s in-session behavior?

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Did the therapist compare in-session events to the participants daily life?

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Did the therapist prompt/encourage the client to engage in particular responses in the session?

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Did the therapist share his/her reaction to the clients behavior?

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Did the therapist check with the participant to see his/her response to the therapist sharing his/her reaction?

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Appendix C

Informed Consent Document
Western Michigan University
Psychology Department

Principal Investigator: Scott Gaynor, Ph.D.
Student Investigator: Daniel Maitland, M.A.
Title of Study: Evaluating the efficacy of Functional Analytic Psychotherapy for enhancing social connectedness in a distressed college student population

You have been invited to participate in a research project titled "Evaluating the efficacy of Functional Analytic Psychotherapy for enhancing social connectedness in a distressed college student population" This project will serve as Daniel Maitland’s Dissertation for the requirements of the PhD. This consent document will explain the purpose of this research project and will go over all of the time commitments, the procedures used in the study, and the risks and benefits of participating in this research project. Please read this consent form carefully and completely and please ask any questions if you need more clarification.

What are we trying to find out in this study?
The purpose of this research study is to evaluate whether Functional Analytic Psychotherapy can be used to enhance social relationships and social connectedness. Through focusing on different aspects of social interactions, we hope to understand effective ways of increasing social connectedness.

Who can participate in this study?
In order to participate in this study, you must be at least 18 years of age, be fluent in the English language, and be struggling with social relationships and meet criteria for Major Depressive Disorder, Social Anxiety Disorder, Generalized Anxiety Disorder, Avoidant Personality Disorder, or Dependent personality Disorder. You will be asked to complete a screening questionnaire assessing your interpersonal relationships to help determine if this study is right for you. If you do not report difficulties in social relatedness you will not qualify for this study. If you do qualify for this study, you will be asked to complete more questionnaires and an interview. If this information suggests you are currently having strong suicidal thoughts, or if you currently meet criteria for a psychotic disorder, PTSD, OCD, or an alcohol/substance use disorder, or do not qualify for a diagnosis of Major Depressive Disorder, Social Anxiety Disorder, Generalized Anxiety Disorder, Avoidant Personality Disorder, or Dependent personality Disorder you will not be able to participate. If you are receiving any psychotherapy or have been on any medications targeting psychological symptoms for less than 6 months, you will not be able to participate. Individuals who enroll in the study and wish to seek out other forms of treatment are welcome to do so, however upon starting concurrent therapy would no longer be appropriate for the current study and at that point the experiment for that individual would end. If you do not qualify for the study, you will be given a therapist referral list, which includes some locations that offer free services to students and a 24-hour support number. Immediate crisis counseling will also be provided if you feel you are a danger to yourself right now.
Where will this study take place?
Participation will take place in research rooms within the clinical psychology research suite 1504 (Wood Hall).

What is the time commitment for participating in this study?
Participants will be randomized into a treatment condition or wait list condition. Time commitments are different for each condition. In the treatment condition there will be 6 one hour counseling sessions over 6 weeks and 2 assessment sessions. The first meeting will be for assessment purposes after which you will take home approximately one hour worth of paperwork, you will then receive 6 weekly counseling sessions. There will then be a 1 month follow up assessment. All sessions will last about 1 hour. Overall, participation in this study will take approximately 9 hours over 11 weeks. Additionally, during participation you will be asked to do a small amount of homework each week, this will amount to approximately 5-10 minutes a week. Total time commitment will then be 8 sessions/60 minutes per session/over 11 weeks, plus 10 minutes of homework a week, for 6 weeks and one week with an hour of paperwork. Participants in the watchful waiting condition will be asked to complete a one hour assessment session, followed by one hour of take home paperwork. They will be asked to come in once a week to complete ~4 minutes of paperwork and give a 10 minute update on their current interpersonal functioning for 6 weeks. After completion of 6 weeks, they will be asked to attend a one hour one month follow-up. Additionally, during participation you will be asked to do a small amount of homework each week, this will amount to approximately 5-10 minutes a week. Participants who complete the wait list condition will be invited to enroll in the treatment condition after the one month follow-up. The time requirement for the treatment condition has been previously explained.

What will you be asked to do if you choose to participate in this study?
Should you agree and qualify to participate in this study, you will be asked to attend 6 weekly, individual sessions (either treatment or a watchful waiting condition) all of which will be videotaped and 3 1-hour assessment sessions (pre-treatment, post-treatment and one 1-month follow up). If you decide to participate, the first assessment session will begin today which will include the screening questionnaires to determine if this study is right for you. After completing the pre-treatment session, if you qualify, you will be given a packet of paperwork to complete and bring to your first session you will begin sessions within one week.

For the treatment condition, the procedures used in treatment have been used in other research protocols and in clinical practice settings. Because the treatment focuses on social relationships you will be asked to talk about important relationships in your life in detail. This will involve sharing your personal thoughts, emotions, and life experiences in relationships with the therapist. Using this info, you and the therapist will decide together the specific focus for your sessions. The treatment will also involve discussion of the interactions occurring between you and the therapist and how the two of you are relating to one another. You will also be asked to give us your opinion of your progress and your opinion of the counseling sessions each week. Finally, you will be asked to complete brief out of session monitoring forms, which will be reviewed with the therapist.
For the watchful waiting condition, participants will be asked to attend weekly monitoring sessions so as to assess current social functioning for 6 weeks. These weekly monitoring sessions will include you talking about the interpersonal interactions of your past week in detail and filling out a number of questionnaires on interpersonal relating. You will also be asked to complete brief out of session monitoring forms, which will be reviewed with the therapist. After completing a one month follow-up, you will be invited to complete the treatment condition.

If you decide to stop participating in the sessions, you will still be invited to attend the assessments. You are also free to completely stop participating for any reason at any time without penalty.

**What information is being measured during the study?**

At the beginning and end of participation you are asked to complete questionnaires asking for general information (such as your age, grade point average, ethnicity, etc.), information regarding your thoughts and attitudes about your relationships, and information about psychological symptoms and distress. While in the counseling, you will be asked to rate your progress and the counseling and evaluate your week on a week-to-week basis.

**What are the risks of participating in this study and how will these risks be minimized?**

One potential risk of your participation in this project is that you may experience some discomfort. This could occur while completing the assessments as the instruments ask about personal thoughts, feelings, and experiences. Likewise, the counseling sessions will also involve discussion of personal thoughts, feelings, or experiences; as would be expected in any counseling context. The hope is that the counseling will help improve relations and reduce distress, minimizing risk; however, the researcher is a graduate student therapist in the Clinical Psychology doctoral program and is prepared to provide crisis counseling should you become significantly upset. In addition, the research therapist is prepared to make a referral if you need further counseling at the conclusion of the study.

All of the instruments used are ones that have been used previously in research or clinical settings. However, should you begin to feel distressed while filling out the questionnaires, or answering interview questions, you are free to not answer any particular question for any reason.

As in all research, there may be unforeseen risks to the participant. Appropriate emergency measures will be taken should you experience severe psychological distress including but not limited to applying crisis management techniques.

**What are the benefits of participating in this study?**

One way in which you may benefit from this study is in a reduction of distress and increased sense of connection in your relationships. Our hope is that the procedures offered can help alleviate distress. However, we cannot guarantee a positive outcome and it is possible that your symptoms will not improve during your participation in this study. There is a limited amount of funding for this study, as such participants who complete the post-treatment assessment will be given a 20 dollar gift card to either Meijer or Subway until funding is depleted. An indirect benefit of your participation is that others who experience difficulties in relationships 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 by contacting Daniel
Maitland by phone or E-mail (269) 387-4497 or Daniel.W.Maitland@wmich.edu. Results will be disseminated via e-mail to those who request them.

Are there any costs associated with participating in this study?
There are no financial costs associated with participating in this research study. The cost to participating is the time (9 hours in the treatment condition, ~ 4.5 hours in the watchful waiting condition [plus the 9 hours in the treatment condition if you choose to enroll in it after the watchful waiting condition]) you will give to attending assessment and treatment sessions and any travel time used to get to and from sessions.

Is there any compensation for participating in this study?
You may be eligible to receive extra credit in one of your classes. If one of your course instructors provides extra credit for participation in research you will be provided with a slip documenting the amount of time you were present participating in the study.

Who will have access to the information collected during this study?
All of the information collected, including the results of the assessment measures and treatment, is strictly confidential. Neither your name nor any other identifying information will 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 a contact information sheet used for scheduling purposes. You will be randomly assigned a code number from 1-90 that will be used on all of the assessment materials. Your individual responses will not be connected with your name or revealed to anyone without your written permission, except where disclosure is required by law. The research therapist is legally required to report reasonable suspicion of child, dependent, or elder abuse or neglect, or if you present a clear and current danger to yourself, to others, to property. If there is an emergency during the course of this study, where your research therapist becomes concerned about your personal safety or the possibility of you injuring someone else, he/she will do whatever is required by the APA ethics code to prevent you from injuring yourself or others and to ensure that you receive the proper medical care. For this purpose, he/she may also contact the police or hospital.

The therapy sessions will be audio or video recorded, and a trained graduate or undergraduate student in the Behavior Research and Therapy Lab will view session videotapes to evaluate treatment. This means that another researcher will view some or all of your tapes to check the focus of the sessions and competence of the therapist. That is, to check if the treatment offered is actually focused on what it is supposed to be focused on. 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 DVDs or videotapes, so your name will not appear on the label. However, because the coders will most likely be undergraduate or graduate students at WMU, 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 Daniel Maitland or Dr. Gaynor, at which point another coder will be assigned or another
participant’s videotape selected. All data (questionnaires and videotapes) 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. Participants will not be personally identified in any reports or publications that may result from this study.

What if you want to stop participating in this study?

You can choose to stop participating in the study at anytime for any reason. You will not suffer any prejudice or penalty by your decision to stop your participation. You will experience NO consequences either academically or personally if you choose to withdraw from this study. The investigator can also decide to stop your participation in the study without your consent. If you choose not to participate in this research study, you may receive similar services 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.

Should you have any questions prior to or during the study, you can contact the primary investigator, Dr. Scott Gaynor, at (269) 387-4482 or scott.gaynor@wmich.edu or the student investigator, Daniel Maitland, at (269) 387-4497 or Daniel.W.Maitland@wmich.edu. You may also contact the Chair, Human Subjects Institutional Review Board at (269) 387-8293 or the Vice President for Research at (269) 387-8298 if questions 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.
I have read this informed consent document. The risks and benefits have been explained to me. I agree to take part in this study.

Please Print Your Name

___________________________________

Participant’s signature Date

___________________________________

Therapist’s signature Date
Appendix D

Classroom Recruitment Script
Script for Classroom Announcements (Maitland Dissertation)

“If you are struggling with difficulties in interpersonal relationships and experience distress we may be able to help you. The WMU Psychology Department is offering treatment for students struggling with their relationships with others as part of a research study. Participation includes 6 free, 1-hour therapy sessions and 3 1-hour assessment sessions. Some participants will be put on a wait list before treatment can be offered. To qualify you must be having significant difficulties with your interpersonal relationships, be fluent in English, be significantly distressed and be at least 18 years old.

If you would like to learn more and find out if you qualify for this study, please contact the Behavior Research & Therapy Lab by e-mailing Daniel Maitland at <Daniel.w.maitland@wmich.edu>.

This treatment is not suited for individuals experiencing severe suicidal ideation. If you are having strong suicidal thoughts please contact the free Gryphon Helpline at 381-HELP (4357).

If you struggle with the relationships in your life this study may be able to help you. Once again, please contact the Behavior Research & Therapy Lab at (269) 387-4497 and ask for Daniel, or e-mail  daniel.w.maitland@wmich.edu  to find out if you qualify.”
Appendix E

Emotion Monitoring Form
Identify 3 feelings/emotions you’ve experienced today. There is no right or wrong answer and no emotion is too big or too small. Sometimes more than one emotion emerges; in these cases identify all the emotions that were present.

<table>
<thead>
<tr>
<th>Date/ Time</th>
<th>Feeling(s)/Emotion(s)</th>
<th>Highest intensity of each emotion (1-10)</th>
<th>Relevant Event(s) – Recent or In Past</th>
<th>Describe any changes in your feelings with time, how long they lasted, or any other relevant observations</th>
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Appendix F

Alternative Emotion Monitoring Form
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
- 5 - neutral
- 4
- 3
- 2
- 1 – feeling deeply distressed

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
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<tbody>
<tr>
<td>Time:</td>
<td>mood:</td>
<td>Time:</td>
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<tr>
<th>Day 7</th>
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<tbody>
<tr>
<td>Time:</td>
<td>mood:</td>
<td>Time:</td>
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Appendix G

Demographics Questionnaire
Participant #____

Demographic Questionnaire

1. What is your age? _____
2. What is your current year in school?  Fresh  Soph  Junior  Senior
3. What is your gender?  Male  Female
4. Are you a full-time student?  Yes  No
5. What is your major?  ___________________________
6. What is your cumulative GPA?  ____________
7. What was your semester GPA in your most recently completed semester?  ____________
8. What is your ethnicity?
   _____ Hispanic or Latino  _____ Not Hispanic or Latino
9. What is your race?
   _____ White, Euro-American  _____ Asian
   _____ African American  _____ American Indian or Alaska Native
   _____ Native Hawaiian or Other  _____ More than one race
10. Are you employed?  Yes (Full or part time?)  No
11. Are you currently in treatment for emotional/behavioral/mental health concerns?
    Yes  No
    If yes, what is the focus of that treatment?  ___________________________
12. Do you have any history of mental health treatment?  Yes  No
    If yes, what was the focus of that treatment?  ___________________________
13. Are you currently taking medication for emotional/behavioral/mental health concerns?
    Yes  No
    If yes, please indicate the medication, dose, and length of use for each medication:
    Med:  Dose:  Length of use:
14. Do you have a history of taking medication for emotional/behavioral/mental health concerns?
    Yes  No
    If yes, please indicate the medication, dose, and length of use for each medication:
    Med:  Dose:  Length of use:
15. Do you use alcohol?  Yes (# drinks per week:  ____ )  No
16. Do you have any history of treatment for alcohol/substance abuse?  Yes  No
16. Do you use tobacco?  Yes (smoke or chew? # of cigs or dips/day?  ____ )  No

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Appendix H

HSIRB Approval Letter
Date: April 15, 2013

To: Scott Gaynor, Principal Investigator
    Daniel Maitland, Student Investigator for dissertation

From: Christopher Cheatham, Ph.D., Vice Chair

Re: HSIRB Project Number 13-02-12

This letter will serve as confirmation that your research project titled “Evaluating the Efficacy of Functional Analytic Psychotherapy for Enhancing Social Connectedness in a Distressed College Student Population” has been approved under the full category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note: This research may only be conducted exactly in the form it was approved. You must seek specific board approval for any changes in this project (e.g., you must request a post approval change to enroll subjects beyond the number stated in your application under “Number of subjects you want to complete the study”). Failure to obtain approval for changes will result in a protocol deviation. In addition, if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

Reapproval of the project is required if it extends beyond the termination date stated below.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: February 20, 2014
REFERENCES


doi:10.1016/0272-7358(92)90070-O


Retrieved from http://www.baojournal.com/


doi:10.1016/j.beth.2008.07.003


doi:10.1023/B:JOCP.0000004502.55597.81


Maitland, D. W. M. (2012). The distinctiveness, intimacy, and efficacy of FAP compared to non-directive support: An alternating treatments design. (Unpublished master’s thesis). Western Michigan University, Kalamazoo, MI.


