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Client Motivation, Working Alliance and the Use of Homework in Psychotherapy

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CLIENT MOTIVATION, WORKING ALLIANCE AND THE USE OF HOMEWORK IN PSYCHOTHERAPY

By

CANDICE M. FRANCO

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Department of Educational Psychology and Learning Systems
in partial fulfillment of the
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ABSTRACT

This study examined a preliminary model of client, therapist and process factors in relation to psychotherapy outcome. These factors included client motivation, homework compliance, therapist homework delivery behaviors and working alliance. Self-determination theory (Deci & Ryan, 2000; 2002) was used to examine qualitative differences in autonomous and controlled forms of client motivation. Data were collected from 147 participants receiving individual counseling at one of three university counseling centers in the United States. Participants completed an online survey which consisted of six questionnaires. Path analysis was used to estimate model parameters. Multiple fit indices were examined in order to assess overall fit and the preliminary model was respecified twice.

Examination of the path coefficients revealed that three of the hypothesized relationships were not significant. Neither autonomous nor controlled motivation significantly predicted outcome, and working alliance did not significantly predict homework compliance. A significant relationship emerged which was not originally hypothesized: therapist homework delivery behaviors significantly predicted working alliance. Working alliance emerged as a strong mediator of autonomous motivation, controlled motivation, and therapist homework delivery behaviors in relation to psychotherapy outcome. Homework compliance significantly mediated the relationship between controlled motivation and psychotherapy outcome. Five indirect effects and two direct effects were reported, thus the final model was a strongly mediated model which accounted for 52% of the variance in treatment outcome. Overall, results indicated that qualitative differences in client motivation may influence psychotherapy process and outcome variables, and that working alliance and homework compliance are significant mediators of both client and therapist factors.

CHAPTER I

INTRODUCTION

The purpose of this chapter is to introduce the study, "Client Motivation, Working Alliance and the Use of Homework in Psychotherapy." This study examines client motivation for psychotherapy and working alliance as predictors of outcome. Additionally, homework compliance is analyzed as a mediator of these relationships. The purpose of this study is to test a preliminary model of client, therapist and process factors (Figure 1) which contribute to psychotherapy outcome. The potential influence of therapist homework delivery of between-session assignments on homework compliance is also investigated. This chapter includes a summary of research on the roles of homework compliance, client motivation, and working alliance in relation to each other and treatment outcome.

Homework

Between-session homework assignments are tasks the client engages in outside psychotherapy sessions designed to reinforce topics discussed in session. This technique has long been recognized as an important component of psychotherapy (Dunlop, 1936; Herzberg, 1941). Research indicates that most clinicians incorporate homework assignments as part of their treatment (Kazantzis, Lampropoulos, & Deane, 2005). Overall results indicate that homework compliance is associated with more favorable treatment outcomes across all samples and treatment approaches (Kazantzis, Deane, & Ronan, 2000). According to Neimeyer and Feixas (1990), homework can be considered an "active ingredient" of treatment when tasks are designed to enhance skills which are introduced in session. Research also indicates that clients who complete more homework assignments experience greater improvement than clients who do little or no homework (Kazantzis, Deane, Ronan, & Lampropoulos, 2005). As such, homework compliance is recognized by clinicians and researchers as a necessary component for achieving therapeutic change (Schmidt & Woolaway-Bickel, 2000).

Therapist Homework Delivery. Variability in homework compliance has been attributed to therapist factors, such as delivery of the tasks (Detweiler & Whisman, 1999). Research indicates that homework compliance is predicted by specific therapist behaviors which include reviewing homework from the previous session (Bryant, Simons, & Thase, 1999; Worthington, 1986), providing clear and descriptive instructions (Fehm & Mrose, 2008), and using written instructions or written materials (Cox, Tisdelle, & Culbert, 1988; Fehm & Mrose,

2008; Shelton & Ackerman, 1974). Other homework delivery strategies have been recommended in order to improve client homework compliance (Freeman & Rosenfield, 2002; Kazantzis et al., 2005; Kazantzis & Lampropoulos, 2002; Tompkins, 2002). These findings indicate that therapist homework delivery methods are a relevant component to homework compliance and are discussed in detail in Chapter 2.

Client Motivation

Client motivation is widely recognized by clinicians and researchers as a critical component to the therapeutic process (Krause, 1966; Ryan, Plant, & O'Malley, 1995). An early review of literature on the relationship between motivation for psychotherapy and outcome yields dissimilar findings (Orlinski, Grawe, & Parks, 1994). These mixed results may be due to varying operational definitions and methodological approaches used to conceptualize and assess client motivation. More recent conceptualizations of motivation and research indicate that client motivation is a predictor of outcome for a variety of mental health issues (Michalak, Klappheck, & Kosfelder, 2004; Schneider & Klauer, 2001; Zeldman, Ryan, & Fiscella, 2004; Zuroff, Koestner, Moskowitz, McBride, Marshall, & Bagby, 2007). Specifically, self-determination theory (SDT; Deci & Ryan, 2000) offers a theoretical perspective of motivation which has gained empirical support in the literature (Deci & Ryan, 2002). This theoretical framework suggests that motivation can be classified as autonomous and/or controlled (Williams, Freedman, & Deci, 1998). Behaviors which are autonomously motivated are experienced as self-initiated and personally-endorsed. Controlled motivation is experienced when an individual is pressured to engage in a behavior because of interpersonal or intrapsychic forces. Research suggests that autonomous motivation is a stronger predictor of treatment outcome than controlled motivation (Michalak et al., 2004; Zuroff et al., 2007), however some studies indicate that controlled motivation is a greater predictor of homework compliance (Curry, Wagner, & Grothaus, 1991). Thus, SDT suggests that differences exist in the quality of motivation and that these variations are clinically meaningful. SDT is incorporated in the present study in order to conceptualize and measure client motivation for psychotherapy.

Working Alliance

The working alliance, or therapeutic alliance, is one of the most empirically studied process variables. This is because the relationship between the client and therapist is recognized as a critical aspect of treatment compliance and outcome. Bordin (1979) suggested that alliance

consists of three components: agreement on goals, agreement on tasks, and the development of a therapeutic bond. This conceptualization has been incorporated into a majority of research studies on the topic. Findings on the relationship between working alliance and treatment outcome consistently indicate that working alliance predicts outcome (Horvath & Symonds, 1991; Martin, Garske, & Davis, 2000).

Relationship between Client Motivation and Homework Compliance

Some studies have investigated the relationship between homework compliance and client motivation. Specifically, investigations of the relationship between homework compliance and motivation for therapy have shown that client motivation predicts homework compliance (Dunn, Morrison, & Bentall, 2006; Sutton & Dixon, 1986). Helbig and Fehm (2004) report that individuals with greater motivation for therapy also exhibit greater homework compliance. Furthermore, Deane, Glaser, Oades, and Kazantzis (2005) report that low client motivation was cited as the highest ranking barrier to psychologists' use of homework with clients diagnosed with psychosis. Ryan (1995) reports that lack of client motivation is frequently as a reason for treatment noncompliance. Other research indicates that motivation type can influence persistence for a task (Vallerand & Bissonnette, 1992) and client use of treatment materials (Curry et al. 1991). Based on these findings, it is reasonable to suggest that motivation is an important component to homework compliance; however, more information is needed to examine this relationship.

Relationship between Working Alliance and Homework Compliance

Research indicates that working alliance predicts homework compliance (Dunn et al., 2002; Murdoch & Connor-Greene (2000). Dunn et al. (2002) conclude that stronger working alliance predicts greater homework compliance in treatment. These findings appear to support Bordin's (1979) suggestion that a strong alliance consists of agreement on goals and tasks. Therefore, clients who agree with their therapist regarding the purpose of the homework task and the associated task requirements may exhibit greater homework compliance. Additionally, Murdoch and Connor-Greene (2000) provide qualitative evidence which indicates that the therapeutic alliance enhances homework compliance because clients are more likely to complete homework tasks as a means of pleasing their therapists if they feel a reliable bond has been established between them. Although the information available on the relationship between working alliance and homework compliance is limited, these initial findings indicate that

working alliance predicts homework compliance. More information is needed to clarify the relationship between these variables.

Relationship between Client Motivation and Working Alliance

Few studies have examined the relationship between client motivation and working alliance. Some results show that client motivation predicts working alliance (Calsyn, Klinkenberg, Morse, & Lemming, 2006; Taft, Murphy, Musser, & Remington, 2004). These studies indicate that clients with greater motivation for treatment develop a stronger working alliance in treatment. Other research indicates that a strong working alliance may offset the negative impact of low client motivation on treatment outcome (Ilgen, McKellar, Moos, & Finney, 2006). As such, the role of working alliance may vary based on client motivation for treatment. Therefore, a majority of the studies on the relationship between client motivation and working alliance indicate that a relationship exists between these variables such that client motivation predicts the quality of the working alliance.

Conclusion

Homework compliance, client motivation and working alliance have been identified as predictors of outcome. Although correlations between these process variables have been established, no study has examined these relationships concurrently. In the present study, homework compliance is examined as a mediator of the relationships between autonomous client motivation and outcome, controlled client motivation and outcome, and working alliance and outcome. It is anticipated that autonomous motivation, controlled motivation, and working alliance improve client engagement in homework tasks which in then enhances treatment outcome. The influence of therapist homework delivery strategies on homework compliance is also investigated. Furthermore, the present study will conceptualize client motivation for psychotherapy according to a theoretical approach which allows for qualitative assessment of multiple reasons underlying client motivation.

Previous research has examined client motivation from a one-dimensional, quantitative perspective. Given recent findings which indicate that several reasons may concurrently underlie client motivation for treatment (Ryan, Lynch, Vansteenkiste, & Deci, 2011), SDT was incorporated in the present study because it uses a comprehensive approach which allows for interpretation of the quality of client motivation. Additionally, the present study examined client motivation from the client perspective in order to gather information about underlying reasons

for motivation which therapists may not be able to accurately report on. Therefore, it was anticipated that a more comprehensive representation of client motivation may be provided from the client's perspective using SDT. A hypothetical model of the interrelatedness of these variables is presented below and in Figure 1.

Statement of the Problem

Although research indicates that homework compliance (Kazantzis et al., 2000), client motivation for therapy (Schneider & Klauer, 2001; Zeldman et al., 2004; Zuroff et al., 2007; Michalak et al., 2004), and working alliance (Horvath & Symonds, 1991; Marten et al., 2000) are significant predictors of psychotherapy outcome when examined separately, no studies to date have examined the combined influence of these variables on outcome nor their potential influences on each other. Additionally, the studies which have examined the role of client motivation in therapy have incorporated insufficient measurement approaches for this construct which limit interpretation of findings. For example, most studies conceptualize client motivation as a matter of quantity, when more recent research indicates that examination of the quality of motivation may be more appropriate. Furthermore, a majority of the information on client motivation, homework compliance and working alliance has been gathered based on the therapist's perspective. The present study examined client motivation, homework compliance, and appraisal of the working alliance from the client's perspective in order to clarify the role of each in relation to psychotherapy outcome.

Social Significance

Clinicians and researchers agree that client motivation and working alliance are critical components of psychotherapy. Additionally, homework is a technique employed by most clinicians which has been shown to enhance outcome. Although these process variables have been investigated individually in the literature, the relationships between homework compliance, client motivation, working alliance have not been examined simultaneously as contributors to outcome. The present study addresses this gap in the literature in order to enhance clinical understanding of the relationships between these variables. The present study also aims to provide information on clients' experiences with motivation for treatment, working alliance and homework in psychotherapy. Further, this study is the first to investigate homework compliance as a mediator of the relationships between client motivation and outcome and working alliance and outcome. This information provides needed information on the client's experience in

treatment so as to clarify the efficacy of techniques and therapeutic approaches. As such, this information could be used to enhance clinical practice.

Hypothesis

Figure 1 is a proposed preliminary model which was examined in the present study. This model describes empirical findings on the relationships between client motivation, working alliance, homework compliance, therapist homework delivery and treatment outcome. These relationships are described in greater detail in Chapter 2. The following approximations of association were examined in the present study:

- Autonomous motivation predicts treatment outcome.
- Autonomous motivation predicts homework compliance.
- Autonomous motivation predicts working alliance.
- Controlled motivation predicts treatment outcome.
- Controlled motivation predicts homework compliance.
- Controlled motivation predicts working alliance.
- Homework compliance predicts treatment outcome.
- Homework compliance mediates the relationship between autonomous motivation and treatment outcome.
- Homework compliance mediates the relationship between controlled motivation and treatment outcome.
- Working alliance predicts treatment outcome.
- Working alliance predicts homework compliance.
- Homework compliance mediates the relationship between working alliance and treatment outcome.
- Therapist homework delivery predicts homework compliance.

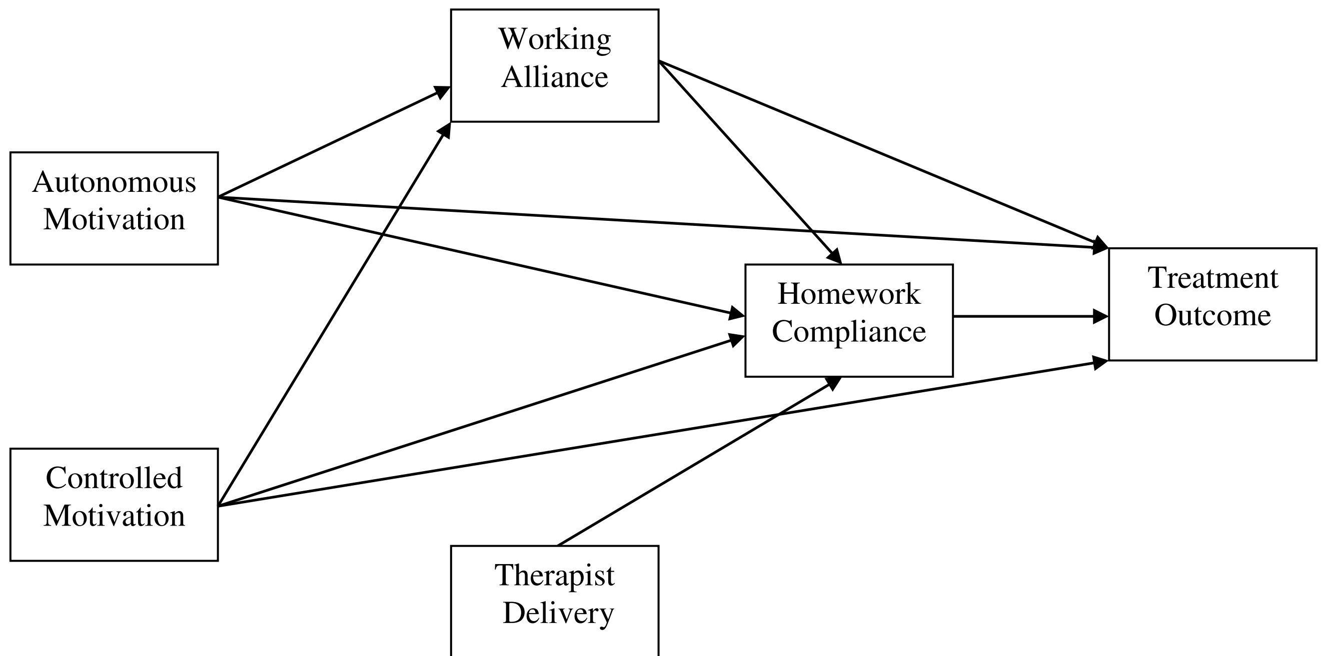

Figure 1. Proposed preliminary model. The hypothesized relationships between two types of client motivation for therapy, homework compliance, therapist delivery of homework assignments, working alliance and psychotherapy (treatment) outcome are presented.

CHAPTER II

REVIEW OF LITERATURE

The purpose of this chapter is to familiarize the reader with literature related to the central topics included in this study: client motivation, working alliance and the use of homework in psychotherapy. It begins with a discussion of homework as a psychotherapy technique. Findings on the relationship between homework compliance and treatment outcome are summarized as well as research on the influence of therapist homework delivery behaviors on homework compliance. The relationship between client motivation and outcome is discussed and SDT (Deci & Ryan, 2000; 2002) is introduced as an empirically-supported conceptualization of client motivation. Additionally, findings on the relationship between client motivation and homework compliance are summarized. This chapter continues with a discussion of the role of the working alliance in relation to outcome, homework compliance and client motivation. Lastly, a hypothetical model which is based on these findings is presented.

Homework Compliance

Homework is an effective and commonly used technique in psychotherapy. Homework assignments are tasks designed to reinforce topics discussed in session while promoting change between sessions. Kazantzis and L'Abate (2007, pp. 3) define homework assignments as "meaningful and intentional activities incorporated into psychotherapy to facilitate patient adjustment and benefit." Between-session homework assignments have long been recognized as an important component of psychotherapy (Dunlop, 1936; Herzberg, 1941). Homework has been incorporated in cognitive behavioral therapy (Beck, Rush, Shaw, & Emery, 1979; Ellis, 1962), behavioral therapy (Kanfer & Phillips, 1966; Shelton & Ackerman, 1974), insight-oriented therapy (Carich, 1990), experiential therapy (Greenberg, Watson, & Goldman, 1988), solution-focused therapy (Beyebach, Morejon, Palenzula, & Rodriguez-Arias, 1996), and rehabilitation counseling (Gandy, 1995). Consequently, homework has emerged as a primary technique for promoting client practice, application and maintenance of newly acquired adaptive skills. A recent survey of 827 practicing psychologists from a broad range of psychotherapy approaches indicates that most clinicians incorporate homework assignments as part of their treatment (Kazantzis et al., 2005).

According to Neimeyer and Feixas (1990), homework can be considered an "active ingredient" of cognitive behavioral therapies when designed to supplement or extend self-help

skills introduced in session. It has been suggested that homework provides the repeated practice necessary to reinforce learning in session (Detweiler & Whisman, 1999) and improve psychological functioning (Burns & Auerbach, 1992). For this reason, homework compliance is a topic which has been heavily researched. The existing literature supports homework compliance as a predictor of therapy outcome. The following section includes a review of this relationship.

Homework Compliance and Outcome

The relationship between homework and psychotherapy outcomes is well-documented (Kazantzis et al., 2000; Kazantzis & L'Abate, 2007). Research indicates that homework compliance predicts positive outcomes in therapy (Addis & Jacobson, 1996; Addis & Jacobson, 2000; Burns & Nolen-Hoeksema, 1991; Burns & Nolen-Hoeksema, 1992; Burns & Spangler, 2000; Leung & Heimberg, 1996; Neimeyer & Feixas, 1990; Persons, Burns, & Perloff, 1988; Startup & Edmonds, 1994;). Other studies have failed to show the correlation between homework compliance and outcome (Edelman & Chambless, 1995; Kornblith, Rehm, O-Hara, & Lamparski, 1983). Kazantzis (2000) reviewed such contradictory findings and concluded that many studies investigating the relationship between homework and outcome have a low probability of detecting existing homework effects. Therefore, insufficient power to detect the effect size of homework may account for nonsignificant findings. Overall, review of existing literature indicates that homework compliance is an important contributor to successful treatment outcome. The following section will review research findings on the role of homework compliance in treatment outcome.

In an attempt to summarize the literature on this topic, Kazantzis and colleagues (2000) examined the findings of 27 studies (N = 1702) conducted between the years 1980 and 1998. Eleven of these investigations examined homework effects and 16 examined the relationship between homework compliance on treatment outcome. Kazantzis et al. (2000) conducted a meta-analysis which accounted for the limitations in statistical power that have been noted in some studies (Kazantzis, 2000). In this meta-analysis, psychotherapy outcome was operationally defined as symptom improvement. Nine of the studies included in the meta-analysis evaluated the treatment of anxiety disorders while the remaining studies assessed treatment for other mental health problems.

A weighted mean effect size was found for homework effects ($M_r = .36$) which indicates that homework assignments promote significant positive gains in therapy across all of the samples included in this meta-analysis. A weighted mean effect size was reported for homework compliance ($M_r = .22$) which indicates that homework compliance significantly predicts outcome across samples and treatment approaches. These findings show that groups who demonstrate greater homework compliance experience the greatest improvement in therapy. Kazantzis et al. (2000) report this value as an average effect size of all samples. They also report mean effect sizes for anxiety ($M_r = .24$), depression ($M_r = .22$), and other mental health problems ($M_r = .17$). The results of this meta-analysis indicate that homework compliance is a relevant and influential component to psychotherapy outcome across a variety of samples and treatment approaches. Among the studies reviewed in the meta-analysis, two are characteristic examples of investigations included in the meta-analysis and will be discussed briefly below.

In an investigation on the efficacy of homework assignments Neimeyer and Feixas (1990) compared the effectiveness of a homework condition with a no homework condition in the treatment for depression. The sample included 59 individuals assigned to 10-week cognitive therapy conditions which were otherwise identical. Homework was used to disconfirm dysfunctional thoughts and develop more balanced alternative thoughts. Assignment to the homework condition significantly predicted a reduction in depressive symptoms during treatment ($R^2 = .17$). The participants who engaged in homework assignments experienced fewer depressive symptoms at termination. This indicates that homework promotes a rapid treatment response for individuals struggling with clinical depression. Furthermore, the authors conducted a six-month follow-up which revealed that clients who maintained their improvement were those who showed greater skill acquisition during treatment. Neimeyer and Feixas (1990) concluded that homework facilitates robust short-term gains during treatment; however, long-term improvement can be expected when clients consolidate and internalize skills that are reinforced by homework tasks. Therefore, homework is a useful technique which can be used to help clients achieve short- and long-term treatment goals.

Addis and Jacobson (2000) conducted a longitudinal study on the effects of homework which was also included in the Kazatzis et al. (2000) meta-analysis. In their investigation of homework compliance, a new homework variable was introduced. These authors examined whether onset of homework compliance influences treatment outcome in order to gather

additional information on changes clients experience while in psychotherapy. The sample consisted of 152 clinically depressed clients who had no concurrent psychological disorders. Therapists rated homework compliance after each therapy session in order to avoid halo effects. Early compliance was assessed in sessions 4-6 and mid-treatment compliance was assessed at sessions 10-12. Homework compliance significantly predicted outcome for both early ($r = .17$) and mid-treatment ($r = .17$) integration. Addis and Jacobson (2000) conclude that homework compliance predicts outcome regardless of when this technique is introduced in treatment. They suggest that homework compliance is unlikely to be an artifact of treatment gains given that clients who complied with homework in the early and mid-stages of therapy had not yet completed treatment. The authors further suggest that these findings provide evidence that a causal relationship may exist between homework compliance and outcome.

More recent studies have investigated this claim. For example, Burns and Spangler (2000) examined the existence of a bidirectional relationship between homework compliance and outcome. The authors attempted to discover whether homework compliance improves symptom severity directly or if reduction in depressive symptoms creates a feedback loop which increases homework compliance. The sample consisted of 521 depressed outpatients receiving cognitive behavioral treatment. Overall the results indicated that outpatients who did more homework were less depressed at treatment termination. A large effect size (- 4.35) was reported for homework compliance on depression scores. The authors report that patients who did the maximum amount of homework improved substantially while patients who refused homework did not improve. Burns and Spangler (2000) also note that severely depressed patients were able to complete homework tasks as well as patients with less severe symptoms. No causal relationship was found for changes in depression on homework compliance scores, therefore no reciprocal causal effects were reported for symptom improvement on homework compliance. The authors reported a moderate correlation between homework compliance and depression scores ($r = -.34$). These results provide additional support for the utility of homework compliance and indicate that a causal, unidirectional relationship is likely to exist between these variables.

In their analysis of data, Burns and Spangler (2000) also suggested that the strength of the correlation reported may have been influenced by the quality of the homework completed. More specifically, the authors proposed that the correlation may have been greater if the quality of the homework responses had been greater. Clinical experience indicates that the quality of

homework assignments influences the efficacy of this technique; however, empirical support for this claim is sparse. Schmidt and Woolaway-Bickel (2000) investigated both homework quality and quantity in order to more closely examine the treatment effects of homework compliance. Homework quality was defined an assessment of how closely the homework completed resembled an ideal response. Four predetermined criteria were given to define an ideal response. These included: whether an anxiety-producing thought was appropriately recognized; whether evidence was used to support and negate this thought; whether a behavioral intervention was created as a result of this thought; and whether this behavioral experiment was engaged in. Quantity compliance ratings were based on the percentage of the task that was completed (0-100%). Quality and quantity ratings were collected for each assignment and were averaged for the week.

Schmidt and Woolaway-Bickel (2000) hypothesized that homework quality would better predict outcome than would homework quantity given clinical experience which suggests that the quality of work completed is more important to treatment than the amount of homework completed. Their sample included 48 participants receiving cognitive-behavioral treatment for panic disorder. The authors reported that clinician ratings of homework quality significantly predicted 7 of 9 outcome measures, whereas therapist ratings of homework quantity significantly predicted only 4 of 9 outcome measures. These results indicate that the quality of homework completed better predicts psychotherapy outcome than the quantity of homework completed between sessions. Schmidt and Woolaway-Bickel (2000) also suggest that homework quality may be an indicator of client engagement and emotional processing in therapy. More information is needed to substantiate these claims.

The research reviewed above indicates that homework compliance significantly predicts treatment outcome. Additionally, it appears that individuals who demonstrate greater homework compliance experience enhanced therapeutic outcomes (Burns & Spangler, 2000) regardless of when this technique is introduced in treatment (Addis & Jacobson, 2000). Furthermore, the quality and quantity of the homework assignments significantly predict treatment outcome (Schmidt & Woolaway-Bickel, 2000), though it appears that the quality of the client's response may be more clinically meaningful. These results provide strong evidence for the inclusion of homework in treatment. Furthermore, these findings support the continued examination of homework compliance as well as variables which may influence compliance. For example,

therapist factors are expected to influence homework compliance. The following section includes a review of investigations on therapist behaviors which have been associated with homework compliance.

Therapist Homework Delivery

Research indicates that homework compliance is influenced by factors related to the therapist (Detweiler & Whisman, 1999). For example, therapist assigning procedures are recognized as an important component of homework compliance (Cox et al., 1988; Helbig & Fehm, 2004). A variety of clinician approaches has been studied with some of this research yielding expected results. For instance, Edelman and Chambliss (1993) report a greater likelihood of homework compliance when clients perceive that their therapist is confident in the technique. Other studies have produced unexpected results. For instance, Burns and Spangler (2000) found no relationship between therapist empathy and homework compliance. Although a variety of clinician assigning procedures has been studied, few therapist homework delivery techniques have been examined in depth. Despite this, specific recommendations have been made regarding assigning procedures (Scheel, Hanson, & Razzhavaikina, 2004; Tompkins, 2002). These recommendations and the evidence which supports them will be reviewed in the following section.

One of the therapist assigning procedures which has been empirically investigated is the delivery of instructions. Startup and Edmonds (1994) examined several therapist behaviors in order to identify those which predict homework compliance. Data were collected from 25 clients who engaged in a collective total of 235 sessions of cognitive-behavioral therapy for depression. The authors reported that homework compliance significantly predicted outcome; however, none of the therapist behaviors emerged as significant predictors of homework compliance. These results were surprising given that the behaviors investigated, such as clarification of instructions and inclusion of specific details of the task, are generally considered necessary for compliance. The authors cited ceiling effects as a possible explanation for these results. Despite these findings, it is recommended that clinicians clarify instructions and include specific details of the task when discussing the assignment (Tompkins, 2002). More information is needed to clarify the effectiveness of these behaviors and the frequency in which they occur in practice.

Another recommendation for clinicians is the inclusion of written instructions when assigning a homework task. A review of 16 empirical studies related to therapist homework

delivery strategies revealed that providing written instruction increases the likelihood of client understanding, implementation and commitment to the homework assignment (Scheel et al., 2004). Helbig and Fehm (2004) also examined the implementation of written instruction in their investigation of problems associated with homework in cognitive-behavioral therapy. In their study, 77 therapists were asked to recall work they did with clients which incorporated homework. Helbig and Fehm (2004) report that problems regularly occur in homework delivery and execution of the task. They also report that providing clients with written instructions significantly predicted patients' homework compliance ($r = .25$). The authors suggest that written instructions provide a more concrete form of communication between therapist and client which minimizes the homework delivery and execution problems that are frequently experienced.

These results support earlier findings from Cox and colleagues' (1988) comparison of oral and written instruction methods. Cox et al. (1988) concluded that written instructions are effective because this technique provides a specific description of the task and how it is intended to be completed. The authors further suggest that writing detailed instructions transforms the homework assignment into an agreed-upon statement while also providing a memory prompt between sessions. Given that clinicians are advised to specify when the client will attempt the task, where the client will do it, what the client will do, how much time should be devoted to it, the beliefs that will be challenged and the anticipated outcome when giving instructions for homework (Freeman & Rosenfield, 2002), writing homework instructions may be a more practical and effective approach for both clinician and client. Although the underlying mechanism for this technique is debated in the literature, results indicate that providing written instructions increases patient homework compliance.

In addition to providing written instruction, clinicians are also advised to design homework assignments that are based on client strengths (Kazantzis & Lampropoulos, 2002). In an investigation of factors which maximize homework compliance, Conoley, Padula, Payton, and Daniels (1994) examined homework design as a predictor of homework compliance. The authors hypothesized that greater compliance would be observed in clients who were asked to engage in tasks built upon their individual strengths and skills. The authors further hypothesized that difficulty of the task and the congruence between the task and the presenting problem would also predict homework compliance. A simultaneous multiple regression was conducted with all three variables emerging as predictors. Together, utilizing client strengths when designing

homework, the difficulty of the task, and the appropriateness of the task for the presenting problem accounted for 68% of the variance in homework compliance. Developing assignments which are based on client strengths emerged as the strongest of these predictors ($\beta = 0.48$). These results indicate that clients are more likely to engage in and complete homework assignments which emphasize their unique personal strengths. The authors recommend that clinicians shift their focus from client deficits to client strengths when designing homework as this is more likely to facilitate homework compliance.

Recommendations for therapists also include reviewing homework assignments regularly (Shelton & Levy, 1981) and including praise when doing so (Kazantzis & Deane, 1999). Early research indicates that following-up on homework assignments increases the likelihood that clients will complete future assignments (Worthington, 1986). Bryant and colleagues (1999) added to these findings in their study of client variables and therapist skills as predictors of homework compliance. Of the therapist skills assessed, review of homework assignments significantly predicted homework compliance ($r = .39$) when all other therapist skills were held constant. Additionally, review of homework assignments was a stronger predictor of homework compliance than all other therapist behaviors assessed. The authors suggest that reviewing homework gives clients the opportunity to attend to gains they made through the implementation of this technique, therefore homework compliance is enhanced. They also suggest that routine follow-up of assignments is likely to promote clients' self-efficacy and effort in treatment, which is also likely to enhance compliance.

In summary, the research presented above indicates that therapist assigning procedures predict homework compliance. Although some results indicate that there is no interaction between therapist assigning procedures and homework compliance (Startup & Edmonds, 1994), some therapist behaviors are supported by consistent findings. Specifically, providing written instructions (Cox et al., 1988; Helbig & Fehm, 2004; Scheel et al., 2004), designing assignments which are based on client strengths (Conoley et al., 1994) and follow-up on homework assignments (Bryant et al., 1999; Worthington, 1986) are recommendations which have been shown to enhance homework compliance. More information is needed on the frequency with which these techniques are employed by clinicians. Additionally, more information is needed on client factors which influence homework compliance. The following section reviews the

information available on client motivation for treatment as this is recognized as an integral component to psychotherapy outcome and homework compliance.

Client Motivation

Client characteristics have been identified as an important component of the psychotherapy process (Detweiler & Whisman, 1999). One of the most relevant client factors is motivation to engage in treatment (Helbig & Fehm, 2004). Studies show that motivation is an important component to the treatment of mental health problems (Geller, Williams & Srikameswaran, 2001). For example, client motivation has been shown to influence the treatment of obsessive compulsive disorder (Pinto, Marinelli Pinto, Neziroglu, & Yaryura-Tobias, 2007), eating disorders (Jones, Bamford, Ford, & Schreiber-Kounine, 2007), and affective disorders (Keijsers, Kampman, & Hoogduin, 2001; Keijsers, Schapp, Hoogduin, Hoogsteyns, and de Kemp, 1999). Other studies have failed to report significant findings (de Beurs, 1993; Mathews, Johnston, Shaw & Gelder, 1974) yet have been criticized for including inadequate assessment methods (Keijsers et al., 1999). Overall, research findings appear to support clinical judgment regarding the importance of client motivation; however, measurement problems have yielded conflicting results.

The incorporation of valid assessment methods in studies of client motivation has been inconsistent. For example, in their examination of of the relationship between homework compliance and outcome Burns and Spangler (1991) investigated the role of client motivation. The authors suggest that client motivation is an important factor to consider when exploring problems with homework compliance; however, client motivation was not adequately measured in their study. The Willingness Scale of the Self-Help Inventory (Burns & Nolen-Hoeksema, 1991) was used to measure client motivation. The authors assessed client motivation with an instrument originally designed to assess client willingness, a related but distinct construct. No justification was given for this approach. The authors concluded that client motivation is not related to homework compliance or outcome. This article is characteristic of studies which use inadequate assessment methods to measure motivation.

Studies on client motivation also fail to include a theoretical perspective when developing an instrument and interpreting the results (Keijsers et al, 2001). For example, the Nijmegen Motivation Questionnaire (NML; Keijsers, Hoogduin & Schaap, 1994) consists of 12 items which were included because they were considered indicative of patient motivation. Although

the NML has been used in studies which show that motivation predicts outcome, this instrument and its later versions have been criticized for lack of clear conceptual background (Keijsers et al, 1999). This lack of theoretical perspective limits interpretation of data and understanding of how client motivation for treatment impacts the process and outcome of psychotherapy. It is critical that investigations of client motivation for therapy incorporate a theoretical framework which operationally defines this historically ambiguous construct. Furthermore, it is necessary to include valid instruments when assessing motivation. The following section introduces an empirically supported theoretical approach which allows for interpretation of client motivation in treatment. Additionally, this approach has been used to develop valid instruments for measuring motivation.

Self-Determination Theory

Self-Determination Theory (SDT; Deci & Ryan, 2000) is a theoretical perspective on motivation which has been empirically tested across a variety of domains. It has been recognized as a meaningful framework by which client motivation for psychotherapy and its potential influence on outcome can be explained (Carter, 2011; Lynch, Vansteenkiste, Deci, & Ryan, 2011; Pelletier, Tuson, & Haddad, 1997; Ryan & Deci, 2008; Ryan et al., 2011; Scheel, 2011; Zuroff, et al., 2007). According to SDT, all humans have inherent tendencies for development and latent psychological needs which form the basis for motivation. One of the primary objectives of this theory has been to describe a differentiated approach to understanding and accounting for motivation by determining which type of motivation is present for a specific endeavor (Ryan & Deci, 2000). SDT describes variations in motivation a matter of quality. As such, this approach transcends earlier conceptualizations of motivation for a behavior as a matter of quantity alone and allows for enhanced interpretation of the complex reasons for engagement.

According to this theory, motivation types are dependent upon innate psychological needs which are essential for enhanced functioning, interpersonal development and mental health. Autonomy is one of these psychological needs. Ryan and Deci (2008) define autonomy as “the self-endorsement of one’s behavior and the accompanying sense of volition or willingness” to engage in this behavior. SDT addresses the interconnectedness of motivation and autonomy by suggesting that people are able to rely on intrinsic motivation when the need for autonomy is met. Therefore, in accordance with this framework, in order for individuals to engage in the therapeutic process autonomously they must perceive that they have an internal locus of

causality for the treatment they are engaging in (Ryan & Connell, 1989). When this is achieved clients are more likely to assimilate learning with behavioral change which leads to more a positive outcome (Ryan & Deci, 2008). Alternately, clients who do not engage in treatment with this perspective experience controlled motivation which is influenced by internal pressures such as guilt or shame, and/or external pressures, such as financial concerns or demands of significant others. Ryan and Deci (2008) suggest that clients who experience controlled motivation are less likely than autonomously motivated clients to have successful outcomes which include long-term behavioral change. They further suggest that individuals who experience controlled forms of motivation are more likely to experience conflict and instability throughout the therapeutic process because they have not internalized a personal accountability for the process of change itself.

Continuum of autonomy. Within this conceptualization of motivation, SDT asserts that all motivations fall on a continuum of autonomy. According to the theory, five categories of motivation can be identified on this a continuum (Ryan & Connell, 1989; Vallerand, 1997), each presenting consequences for learning and well-being (Ryan & Deci, 2000). SDT suggests that people are motivated to promote their personal health and growth by engaging in enjoyable, healthy activities through a tendency that is recognized as intrinsic motivation (Deci, 1975; Markland, Ryan, Tobin, & Rollnick, 2005). Intrinsic motivation is achieved when behaviors are chosen exclusively for the pleasure and satisfaction associated with the behavior. Because intrinsic motivation is entirely autonomous and self-determined, it lies at one end of the continuum.

Alternatively, when a behavior is performed for reasons other than inherent satisfaction, SDT suggests that individuals experience extrinsic motivation. This type of motivation is experienced when one engages in activities that are perceived to be irrelevant, unpleasant and/or dictated by societal expectations (Deci & Ryan, 1985). As Ryan and LaGuardia (2000) explain, much of what people do is the result of extrinsic motivation because social pressures are the motivating force. Four types of extrinsic motivation have been identified along the continuum of autonomy. According to SDT, these variations in motivation reflect differing degrees to which a requested behavior is valued by the individual. As a result, the remaining four subtypes of motivation are defined by the degree to which the behavior is valued, integrated and internalized (Ryan & Deci, 2000).

Integrated regulation is the most autonomous form of extrinsic motivation; therefore it is adjacent to intrinsic motivation on the continuum. This is experienced when the motivation for a goal is congruent with an individual's identity and schemas. Therefore, when an individual acts with integrated regulation, the regulations that are imposed upon him are deemed consistent with his values and needs (Ryan & Deci, 2000). As a result, integrated regulation can lead to a greater sense of autonomy; however, it remains distinct from intrinsic motivation because the action was completed for reasons other than inherent enjoyment. The next subtype, identified regulation, is slightly less autonomous than integrated regulation. Identified regulation is experienced when an individual performs an action because the underlying values and beliefs of the behavior have been consciously accepted. In this case the action is conceptualized as personally important to the individual. Some studies, group identified regulation, integrated regulation and intrinsic motivation into the broader category of autonomous motivation (Ryan & Deci, 2000; Zuroff et al., 2007).

The remaining two types of extrinsic motivation are considered controlled forms of extrinsic motivation. Introjected regulation refers to motivation that is related to or contingent upon elements of self-esteem. Behaviors which are motivated by introjected regulation are typically engaged in to avoid guilt or shame. Introjected behaviors are perceived to have an external locus of control. External regulation is the least autonomous and most controlled form of motivation as it is derived entirely from external factors such as punishment or reward. The behaviors are often performed to meet external demands and are typically experienced as overtly controlled. In some studies, introjected regulation and external regulation have been collectively conceptualized as controlled motivation (Williams, Grow, Freedman, Ryan & Deci, 1996; Zuroff et. al., 2007). The final type of motivation identified by SDT is amotivation, or the complete lack of intention to act. It has been hypothesized that amotivation is experienced when an individual does not value an activity (Ryan, 1995), does not feel competent to successfully complete it (Bandura, 1986), or does not anticipate a desirable outcome (Seligman, 1975). Amotivation and intrinsic motivation lie at opposite ends of the self-determination continuum.

According to Lynch et al. (2011), the SDT continuum is content free, situation specific and dynamic. Autonomy is not defined by the action or command but by a person's free assent to act. Thus, an individual may engage in a behavior for controlled reasons in one instance and may subsequently engage in the same behavior for autonomous reasons in another instance. As such,

the quality of motivation can vary though the individual may be highly motivated in both cases. Lynch and colleagues (2011) suggest that quality of motivation may change in this way because it is dependent on past experiences and that which is experienced in the moment. In addition to being content free, situation specific, and dynamic, the authors suggest that the continuum is inclusive of varying worldviews. Citing criticism that the continuum of motivation may only be applicable to clients who are individualistic as it is based upon the valuing of autonomy, Lynch et al. (2011) clarify important differences in the terms autonomy and individualism. According to these authors, it is possible for an individual to hold collectivist beliefs which are fully integrated into the self and to engage in practices associated with these beliefs which are inherently enjoyable and autonomously motivated. As such, autonomous motivation does not imply individualistic views of the world. Conversely, a person is equally likely to develop an individualistic orientation or a collectivist orientation for reasons which are based on the innate psychological need for autonomy. Thus SDT asserts that, across culture, the greater autonomy a person experiences when engaging in behaviors, the greater the person's well-being.

The Transtheoretical Perspective

Several studies investigating the role of client motivation for therapy have omitted theoretical conceptualization and operational definition of client motivation altogether. Of the studies which do incorporate a theoretical perspective, the transtheoretical perspective (TTM; Prochaska & DiClemente, 1986; Prochaska, DiClemente, & Norcross, 1992) is incorporated most frequently. TTM is a framework which has been used to better understand client change. According to TTM, clients move through a series of distinct stages in which they develop increasing self-efficacy about achieving a desired change. These stages include: precontemplation (the client is not considering change); contemplation (the client weighs the benefits and costs of change); preparation (the client prepares for change); action (the client makes change); and maintenance (the client sustains positive change). Together, these comprise the Stage of Change Model (SOC) which is central construct of this perspective. Specific time frames have been associated with these stages (Prochaska et al., 1992). TTM assumes that each stage is qualitatively different from the next because each reflects distinct motivational orientations (Velicer, Hughes, Fava, Prochaska, & DiClemente, 1995).

Although TTM has been employed frequently in the literature as method of conceptualizing client motivation for treatment, weaknesses in this approach have been identified

(Weinstein, Rothman & Sutton, 1998; West, 2005; Wilson & Schlam, 2004). Specifically, the sequencing of the stages has been criticized as longitudinal investigation fails to support the systematic movement through discrete stages of the SOC (Herzog, Abrams, Emmons, Linnan, & Shadel, 1999; West, 2005). For example, in a longitudinal study of adolescent smoking behaviors, observed changes predicted stage transitions in only 4 out of 24 cases (Guo, Aveyard, Fielding, & Sutton, 2009). Additionally, Rosen (2000) conducted a meta-analytic review of TTM and concluded that the sequencing of change proposed by the SOC is not consistent across all problems. It has been suggested that the most problematic aspects of TTM is its apparent inability to predict progression from the preparation stage into the action stage (Armitage, Sheeran, Arden, & Conner, 2004; Lewis, Simmons, Silva, Rohde, Small, Murakami, 2009). As such, it has been suggested that TTM may not accurately reflect the change process. Armitage and colleagues (2004) suggest that the lack of empirical support for TTM indicates that there may be a disjoint in the SOC itself. Therefore, TTM may not adequately describe the transition process because it fails to account for important variables underlying the change process itself.

Ryan and colleagues (2011) suggest that this inadequacy is related to the model's assumptions about client motivation for change. The authors argue that TTM gives insufficient attention to qualitative differences in motivation which limits the model's prediction of transition from early stages to late stages of change. For example, a client who engages in treatment for autonomous reasons may experience change differently than a client who engages in treatment for more controlled reasons; however, TTM does not account for these differences. According to SDT, autonomous reasons for engaging in treatment are more likely to result in therapeutic change whereas controlled reasons are less likely to produce therapeutic change. SDT is this perspective allows for enhanced interpretation of client motivation because it includes qualitative dimensions of motivation which earlier perspectives have failed to include. TTM does not allow for interpretation of client motivation for change in this way. Based on this information, it appears that SDT is a framework which may provide a more comprehensive view of motivational processes underlying therapeutic change than TTM. The following section includes a review of findings on the relationship between client motivation and psychotherapy outcome. Each of the studies reviewed conceptualize client motivation within the SDT framework presented above.

Client Motivation and Outcome

Although client motivation for therapy has long been recognized as a critical factor for the success of treatment, few studies have investigated this topic. Pelletier et al. (1997) conceptualized client motivation for psychotherapy within the SDT framework in order to develop a measurement of client motivation. They developed the Client Motivation for Therapy Scale (CMOTS) so as to examine the potential influence of client motivation on behavioral change and psychotherapy outcome. The authors assessed several types of motivation as defined by SDT. It was hypothesized that differences in client motivation would correspond to the continuum of autonomy. Results supported the presence of a self-determination continuum such that correlations among the types of motivation formed the simplex pattern SDT describes. Adjacent types of motivation had high, positive correlations (intrinsic and integrated regulation, $r = .57$; integrated and identified regulation, $r = .49$) whereas those on opposite ends of the continuum had negative correlations (intrinsic and external regulation, $r = -.17$; integrated and external regulation, $r = -.28$). The authors note that deviations in the simplex model were observed, but concluded that the global pattern of correlations supports the existence of the SDT continuum.

Pelletier et al. (1997) also hypothesize that the types of motivation identified on the SDT continuum are associated with distinct psychological functioning, varying therapeutic experiences and differences in overall outcome. When all forms of motivation were compared, the self-determined or autonomous forms were positively correlated with more constructive psychological functioning. For example, intrinsically motivated clients experienced a more internal locus of control ($r = .26$), greater self-esteem ($r = .21$), greater positive mood ($r = .42$), less tension ($r = -.24$), and less depression ($r = -.21$). The self-determined forms also had more positive experiences in therapy. For instance, clients with integrated regulation experienced a high importance for therapy ($r = .41$), reported high satisfaction with therapy ($r = .33$), and had strong intentions for continuing ($r = .24$) whereas the clients with more controlled types of motivation did not. These results indicate that varying types of client motivation are associated with psychological processes that would be expected to influence psychotherapy outcome. This study has been recognized as an important first step in applying SDT to psychotherapy with empirical methods (Zuroff et al., 2007). The CMOTS differentiated the types of motivation identified by SDT and demonstrated that the autonomous forms where positively correlated with

several positive responses to therapy. In general, the controlled forms of motivation were unrelated to these responses. Despite the potential utility of the CMOTS, it has not been widely used in subsequent investigations.

In a related study of personal goals of psychotherapy patients, client motivation for therapy was explored in relation to psychopathological state and session outcome (Michalak et al., 2004). The authors conceptualized motivation for therapy within the SDT framework. It was hypothesized that clients with autonomous motivation would demonstrate efficient goal-oriented behavior in therapy sessions and report favorable session outcomes. Motivational orientation was assessed using 5 items on a questionnaire that was administered to assess expectancy values as well. Each item corresponded with the following SDT motivation subtypes: external regulation, introjected regulation, identified regulation, and intrinsic motivation. Psychopathological symptoms were assessed with the Symptom Checklist-90-Revised (Derogatis, 1986), Brief Symptoms Inventory (BSI; Derogatis, 1993), Psychiatric Epidemiology Research Interview-Demoralization Scale (Dohrenwend, Shrout, Egri, & Mendelsohn, 1980), Sense of Coherence Scale (Antonovsky, 1987), and Inventory for Interpersonal Problems (Horowitz, Straub, & Kordy, 1994). Session outcome was assessed from both the client’s and therapist’s perspective using questionnaires that were developed for this study.

Of the 72 outpatients who were diagnosed with an anxiety or mood disorder, results indicated that autonomous motivation was facilitative for the participants’ treatment. For example, significantly lower levels of psychopathology were experienced by participants who reported autonomous types of motivation before therapy (r = -40) and in the middle phase (r = -.45). Additionally, results indicate that more favorable session outcomes were reported by participants who were identified as autonomously motivated before therapy (r = .53) and in the middle phase (r = .51) in comparison with clients who had a more controlled subtype. Furthermore, a significant effect for self-determination of goals was reported (β = -.41). Autonomous motivational orientation was a significant predictor of symptom reduction and accounted for approximately 32% of the variance in BSI scores. Michalek et al. (2004) explained these results by suggesting that clients who have self-determined goals, and thus reported more autonomous types of motivation, may be more likely to experience positive session outcomes despite challenges that arise in session.

Zeldman and colleagues (2004) also used SDT to conceptualize client motivation for therapy in their investigation into the role of client motivation in substance abuse treatment. Data were collected from 74 individuals who were outpatients of a voluntary methadone maintenance program. Motivation was assessed using the Treatment Motivation Questionnaire (Ryan et al., 1995). Treatment consisted of weekly group and individual counseling sessions. Zeldman et al. (2004) found that internal motivation was negatively related to missed attendance of treatment services and predictive of lower relapse rates whereas external motivation predicted missed attendance and was not significantly related to reduced relapse rates. Additionally, a subgroup of the sample who reported high external motivation and low internal motivation were noncompliant with treatment. The authors concluded that this motivational orientation undermined treatment compliance and maintenance of skills. These results indicate that client motivation has an important role in treatment outcome.

Zuroff et al. (2007) conducted a similar study which examined the autonomous motivation and outcome of 3 types of treatment for depression. Client motivation was operationally defined according to SDT for this study as well. Clients were considered autonomously motivated if they experienced the development of their counseling goals as something they freely agreed with. . Citing weaknesses in the development of the CMOTS, Zuroff and colleagues (2007) assessed motivation with the Autonomous and Controlled Motivations for Treatment Questionnaire which was adapted from the Treatment Self-Regulation Questionnaire (Williams et al., 1998) for assessing motivation for the treatment of diabetes. In addition to autonomous motivation, Zuroff et al. (2007) also examined therapeutic alliance as a predictor of psychotherapy outcome. Furthermore, the authors compared the predictive ability of these factors across three types of therapy: interpersonal therapy (IPT), cognitive-behavioral therapy (CBT), and pharmacotherapy (PHT-CM). Each type of therapy was used to treat depression. The authors evaluated outcome by assessing client symptom reduction through pre- and post- treatment administration of structured interviews using The Hamilton Rating Scale for Depression (HSRD; Hamilton, 1960, 1967) and the Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996).

Of the predictors evaluated, only autonomous motivation varied by treatment condition. Autonomous motivation was significantly lower in PHT-CM ($M = 5.34$,) than in either IPT ($M = 5.87$) or CBT ($M = 5.86$). Furthermore, significant effects for autonomous motivation were

found. Therapeutic alliance did not significantly predict treatment outcome. The authors concluded that the positive effect of autonomous motivation was the same for all treatment conditions. Results of this study also indicated that the odds ratio for autonomous motivation = 1.95 which indicates that patients with high autonomous motivation were almost twice as likely to respond to treatment than those with average autonomous motivation and approximately four times as likely as those with low autonomous motivation. Additionally, autonomous motivation for treatment predicted reduction in symptoms of depression at post-treatment as measured by HRSD and by BDI-II.

Zuroff et al. (2007) also conducted subsequent change analyses to investigate if the benefits of autonomous motivation would be experienced in a more regulated environment. Again, autonomous motivation significantly predicted reduction in depressive symptoms in the follow-up analysis which controlled for symptom change early in treatment. Whereas the therapeutic alliance did not significantly predict outcome in the initial analyses, it significantly predicted reduction in post-treatment symptoms of depression. The standardized regression coefficients obtained in the analysis of symptom severity as predicted by autonomous motivation ranged from $\beta = .31-.40$. The authors note that these effect sizes are greater than the effect size of the working alliance ($\beta = .20$) which was reported in earlier meta-analyses of examining the alliance as an outcome predictor (Beutler, Malik, Alimohamed, Harwood, Talebi, Noble, & Wong, 2004; Horvath & Bedi, 2002; Horvath & Symonds, 1991; Martin et al., 2000). Overall, findings presented by Zuroff and colleagues (2007) indicate that autonomous motivation may be a stronger predictor of recovery from depression than therapeutic alliance. The relationship between client motivation and working alliance is discussed later in this chapter.

The studies reviewed above indicate that motivation for therapy is a client factor which is relevant to treatment. Furthermore, the research presented above shows that SDT is a meaningful framework which can be used to operationally define and measure client motivation. The studies which utilize this approach yield consistent results such that client motivation predicts outcome (Pelletier et al., 1997; Zeldman et al., 2004; Zuroff et al., 2007). Despite these findings, the role that motivation has in relation to other outcome predictors warrants further discussion. Given research which also indicates that homework compliance is a predictor of outcome (Kazantzis et al., 2000), the potential relationship between client motivation and homework compliance is

examined. The following section reviews the information available on the relationship between client motivation and homework compliance.

Client Motivation and Homework Compliance

Though research indicates that client motivation (Michalek et al., 2004; Zeldman et al. 2004; Zuroff et al., 2007) and homework compliance (Kazantzis et al, 2000) predict outcome, little information is available on the potential interaction between client motivation for therapy and homework. Helbig and Fehm (2004) investigated this topic in their study of problems associated with homework in cognitive behavioral therapy (CBT). The sample included 77 therapists who identified CBT as their therapeutic orientation. Each completed a questionnaire which consisted of items evaluating client motivation for therapy, motivation for homework, and problems clients experienced with these homework assignments. No theoretical framework was referenced in the authors' interpretation of client motivation. The study also examined task difficulty and several aspects of the therapists' homework delivery. The participants included 149 outpatients, primarily female (69.1%), who had been diagnosed with anxiety disorders (32%), affective disorders (26.8%), personality disorders (10.7%), adjustment disorders (8.7%) and somatoform disorders (8.1%). Approximately 20% of the clients were in the beginning stages of therapy, 68% were mid-treatment, and 12% were in a maintenance stage of treatment which focused on relapse prevention.

Problems with homework assignments were reported for 53% of the clients, with less than 40% completing the assignments. No significant relationships were found for homework compliance and task characteristics, such as task difficulty or time needed to complete the task. Alternatively, patient characteristics were more closely associated with homework compliance than characteristics of the assignment itself. Specifically, client motivation for therapy ($r = .36$) and client motivation for homework ($r = .55$) were positively correlated with homework compliance. The clients who were more motivated for therapy and for homework were more likely to comply with homework as an aspect of treatment. The authors concluded that task characteristics seem to be less influential on homework compliance than client motivation for therapy.

The relationship between motivation for therapy and homework compliance has been examined within the context of smoking cessation as well (Curry et al., 1991). The use of self-help materials was analyzed amongst smokers (N = 1217) who were grouped by type of

motivational strategy used to support smoking cessation: intrinsic (n = 304), extrinsic (n = 304), both (n = 304) or neither (n = 305). The intrinsic motivational strategy consisted of individualized feedback which incorporated prior research findings on strategies which enhance self-efficacy and self-control. The extrinsic motivation strategy consisted of a prize incentive. As the authors hypothesized, intrinsically motivated smokers reported lower homework compliance (17%) yet were more than twice as likely to report continuous abstinence as the extrinsic group. Participants with extrinsic motivation were twice as likely to complete homework assignments (32%) as the control group, yet they did not stop smoking for these participants. Thus, intrinsically motivated participants engaged in treatment for more autonomous reasons and experienced more positive results whereas extrinsically motivated participants engaged in treatment for controlled reasons and experienced less positive results. Based on these results, Curry et al. (1991) concluded that type of motivation may have an influence on homework compliance as well as therapeutic outcome.

Although homework compliance and motivation for therapy have been examined separately in the literature, few studies have investigated the interaction between these outcome predictors. Helbig and Fehm (2004) and Curry and colleagues (1991) conducted studies which indicate that a relationship exists between client motivation and homework compliance. These findings warrant further investigation in order to more accurately describe processes which underlie psychotherapy outcome. More information is needed to confirm these results and explore how these outcome predictors may interact when studied simultaneously. The following section introduces another process variable, the working alliance, which is also considered highly relevant to psychotherapy outcome.

Working Alliance

The therapeutic relationship is considered one of the most important aspects of psychotherapy. Clinicians and researchers agree that successful outcome depends upon a health relationship between the client and therapist. Specifically, the working alliance, or therapeutic alliance, has been identified as an aspect of the relationship which is an essential ingredient of psychotherapy (Gaston, 1999). It has been suggested that failure to attend to the alliance in session is unethical because of its relevance to treatment (Castonguay, Constantino, & Holtforth, 2006). As such, the working alliance is one of the most frequently studied processes of change. The following section introduces a definition of the working alliance within the context of its

iterative development in the literature. Additionally, a review of the empirical evidence on the working alliance as it relates to outcome, homework compliance and client motivation is also included.

Conceptualization of Working Alliance

The concept of the alliance originated with Freud's (1966) discussion of transference. He suggested that the development of the attachment between client and therapist should be one of the first aims of treatment. Since then, the role and technical implications of the alliance have been addressed from varying theoretical perspectives in the literature (Brenner, 1979; Greenson, 1975; Luborsky, 1976; Sterba, 1934; Zetzel, 1956). These contributions led Bordin (1979) to propose a definition of the therapeutic alliance which is generalizable to all psychotherapy approaches. He conceptualized the alliance as a function of three core components: agreement on goals, assignment of tasks, and the development of bonds.

According to Bordin (1979), agreement on goals can take a variety of forms which are largely influenced by the theoretical orientation of treatment. For example, in behavior therapy the client and therapist may agree upon a goal which entails reduction in a specific maladaptive behavior. Alternately, in psychoanalytic treatment the therapist and client may establish goals such as exploration of the client's perpetuation of undesirable circumstances. Bordin (1979) also suggests that the working alliance consists of assignment of tasks for the client and for the therapist. For example, the client may agree to engage in between-session homework in order to explore and reinforce lessons learned in session. Similarly, the therapist is expected to engage in tasks aligned with his role as the clinician, such as conveying empathy or self-disclosing. Lastly, Bordin (1979) describes the development of a therapeutic bond as a gradual process in which trust is established and enhanced throughout treatment.

Bordin (1979) further suggests that the working alliance enables the client to adhere to treatment. He argues that a good relationship between the client and therapist is essential because it enhances the effect of the working alliance as a mechanism of change. The role of the alliance and its potential impact on psychotherapy outcome has been investigated extensively. The pantheoretical orientation of Bordin's (1979) conceptualization of this concept led a majority of researchers to operationally define working alliance from this perspective. The following section reviews the empirical findings on the working alliance as it relates to outcome. Additionally,

investigations of factors which may influence the working alliance and the interrelatedness of the working alliance with other process variables are also discussed.

Working Alliance and Outcome

In order to examine the claims that the working alliance is an essential aspect of therapy, several empirical investigations have been conducted on this topic. These investigations have yielded consistent results which indicate that alliance predicts outcome across theoretical orientation and when different alliance instruments are employed. This section reviews two meta-analyses which are frequently cited as evidence for the efficacy of the working alliance (Horvath & Symonds, 1991; Martin et al., 2000). This section also summarizes findings on the correlation between client and therapist ratings of alliance in order to clarify whether a difference exists between these perspectives and which is a more reliable predictor of outcome. Lastly, studies which investigate the relationship between working alliance and related variables such as client motivation and homework compliance are also included.

Horvath and Symonds (1991) conducted the first meta-analysis on the relationship between working alliance and outcome in psychotherapy. The authors analyzed the results of 24 studies in order to address several research questions. The data were collected over a span of 11 years and included 20 distinct data sets. Inclusion criteria specified that the psychotherapy had to take place in a clinical setting and be conducted by an experienced clinician. Additionally, the studies were required to have a quantifiable relationship between alliance and outcome, include clinical information, and focus on individual therapy in which 5 or more participants were included.

On average, the therapists had 8.1 ($SD = 5.7$) years of experience. The mean sample size of the studies was 49 ($SD = 39.8$) participants, the average length of treatment was 20.6 ($SD = 12.36$) sessions and the samples were 70% female. The homogeneity of the sample was assessed and it was determined that there was more variability in the sample than would be expected by chance alone. The studies included ratings of the working alliance from the client, the therapist and an observer's perspectives. The results indicate that the working alliance has an overall effect size of .26 ($p < .05$). Although this effect size is not considered large, it is similar to the values of other psychotherapy variables considered relevant to therapy as well. The results also indicate that the quality of the working alliance was most predictive of outcome from the client's perspective (ES = .31) as compared to the therapist (ES = .22) or observer (ES = .29) ratings.

Clients' and observers' rating of alliance and outcome yielded similar ratings, however there was a substantial difference between these ratings and those of the therapists. Additional analysis indicated that in 9 out of 13 studies in which only the client and therapist perspectives were assessed, the client's evaluation of the working alliance was a superior predictor of outcome. The results also indicate that the quality of the working alliance was most predictive of outcome from the client's perspective (ES = .31) as compared to the therapist (ES = .22) or observer (ES = .29) ratings. Clients' and observers' rating of alliance and outcome yielded similar ratings, however there was a substantial difference between these ratings and those of the therapists. Additional analysis indicated that in 9 out of 13 studies in which only the client and therapist perspectives were assessed, the client's evaluation of the working alliance was a superior predictor of outcome.

Horvath and Symonds (1991) further concluded that the relationship between working alliance and outcome did not vary with therapeutic approach. The studies included in this meta-analysis used interventions from psychodynamic therapy, cognitive therapy, Gestalt therapy, and an integration of several orientations. The relationship between alliance and outcome was significant for all psychotherapy approaches. Additionally, the length of treatment was also assessed as a potential factor which may influence the relationship between alliance and outcome. The range of treatment varied between fewer than 10 sessions and more than 50. The authors concluded that the length of treatment did not influence this relationship as the correlation between these variables was not significant. Similarly, the stage of therapy when the assessment occurs was also examined given suggestion that the alliance may be stronger between individuals who have engaged in more psychotherapy sessions. The authors report that the effect sizes for early (ES = .31) and late (ES = .30) assessment of alliance were nearly identical, therefore it is likely that alliance predicts outcome regardless of when it is measured.

Following the publication of Horvath and Symond's (1991) meta-analysis, several additional investigations were conducted which examined the working alliance as a predictor of outcome. Because of this surge of information, a second meta-analysis was conducted by Martin and colleagues (2000) in order to provide an updated review of the data. A total of 79 studies were included, 49 of which were published after Horvath and Symonds (1991). Marten et al. (2000) reported that several more studies were published in this time than were included in their meta-analysis, however only 49 met the inclusion criteria originally established by Horvath and

Symonds (1991). Two additional criteria were added: in the use of English and availability between 1977 – 1997.

Marten et al. (2000) examined alliance as a predictor of outcome and also investigated whether the relationship between alliance and outcome varies with type of rater (client, therapist, and observer) and stage of therapy. The authors assessed the reliability of assessment instruments which were used to measure alliance in order to determine if one scale emerged as the most reliable of the many available. The 79 studies included in this meta-analysis were conducted over an 18-year time span. The mean sample size was larger than the earlier meta-analysis (60.4, *SD = 64.6*) and the average length of treatment was slightly longer (22.18 sessions, *SD = 18.8*). The average amount of therapist experience was identical (8.1 years, *SD = 5.23*) and approximately 70% of the participants included in the samples were female. Of the 79 total studies included, 21 were unpublished studies located through a dissertation abstracts database.

The results of this meta-analysis indicate that working alliance is a significant predictor of outcome, however the overall weighted effect size reported was lower (ES = .22) that the effect sizes previously reported by Horvath and Symonds (1991). The alliance ratings of patients (n = 37), therapists (n = 26) and observers (n = 25) all had adequate reliability, although clients demonstrated greater consistency than therapists or observers. The authors concluded that clients tend to experience the alliance as more stable than the other raters. There was no significant difference in the relationship between alliance and outcome when alliance was rated by clients, therapists or observers. Additionally, there was no significant difference in this relationship when the alliance was measured in the early, mid or late stages of therapy. The study failed to implicate a specific alliance measure as more reliable than others or to eliminate a scale. Despite these findings, Marten and colleagues (2000) suggest that the Working Alliance Inventory (WAI; Horvath & Greenberg, 1989) and its abbreviated versions are the most appropriate for research purposes because they were designed to measure alliance across treatment approaches in order to measure factors which underlie the alliance itself. This instrument is discussed in greater detail in Chapter 3.

Although the relationship between working alliance and outcome has been examined extensively in the literature, the omission of data on client dropout has complicated meta-analytic review of the topic. A recent investigation examined the strength of the relationship between psychotherapy dropout and alliance through meta-analysis of 11 studies (Sharf, Primavera, &

Diener, 2010). The studies included in this review had an average of 118 participants (*SD = 115*). The participants presenting problems varied in severity. All were outpatients seeking treatment from university-based counseling centers, clinics or hospital settings. As the authors expected, weaker alliances predicted dropout ($d = .55$) although this relationship was more robust than hypothesized. Thus, this meta-analysis appears to have demonstrated that a moderately strong relationship exists between working alliance and psychotherapy dropout. Similar results were reported in a study which examined therapeutic alliance as a predictor of drug treatment dropout (Meier, Donmall, McElduff, Barrowclough, & Heller, 2006). Meier et al. (2006) concluded that a 1 point increase in counselor-rated alliance on a modified version of the WAI reduced the likelihood of client dropout from drug treatment by 6%.

The findings on working alliance as a predictor of psychotherapy outcome indicate that this relationship is moderate. According to Horvath and Symonds (1991) and Marten et al. (2000), a stronger working alliance between client and therapist predicts a more positive psychotherapy outcome. This relationship does not appear to be moderated by therapeutic approach, type of rater, stage of therapy, or alliance instrument employed. Additionally, Sharf et al. (2010) reported that a moderately strong relationship exists between working alliance and dropout. Although these findings are consistent, more information is needed to better understand how working alliance influences outcome indirectly. The following sections summarize findings on the associations between working alliance and homework compliance as well as working alliance and client motivation.

Working Alliance and Homework Compliance

Psychotherapy research has developed an increasing inclusion of process variables which are expected to impact treatment outcome. Working alliance and homework compliance are two process variables which have been researched thoroughly as independent components of psychotherapy. Studies indicate that both working alliance (Horvath & Symonds, 1991; Marten et al., 2000; Sharf, et al., 2010) and homework compliance (Kazantzis et al., 2000; Kazantzis & L'Abate, 2007) are significant predictors of treatment outcome. Few studies have investigated both process variables in relation to each other or examined their combined contributions to treatment outcome. Two published studies have investigated alliance and homework compliance in individual therapy. These findings are summarized below.

Dunn and colleagues (2006) examined the relationship between therapeutic alliance, homework compliance and outcome in cognitive therapy for psychosis. The authors hypothesized that clients and therapists would agree on the strength of the alliance, that the quality of the alliance would predict homework compliance, and that outcome would be significantly predicted by the alliance and homework compliance. The participants included 29 adults (22 female, 7 male) diagnosed with a schizophrenia spectrum disorder who completed treatment. The mean age of the participants was 38 (*SD* = 11.7) years. All participants were outpatients and 27 received antipsychotic medication in addition to psychotherapy. The therapists and clients rated the working alliance, homework compliance and symptom improvement. Alliance and homework data were collected at session 3, 9, 15, and 21. Positive and negative symptoms of psychosis were rated at onset and termination of therapy. The number of sessions ranged from 4 to 35 (*M* = 17.8, *SD* = 8.1).

As hypothesized, there was a significant correlation between the client and therapist ratings of the alliance ($r = .41$). Additionally, results of the study confirmed the hypothesis that working alliance and homework compliance are correlated ($r = .66$). Therefore, better quality of working alliance may predict greater homework compliance. These results support Bordin's (1979) conceptualization of alliance as inclusive of agreement on goals and tasks. Clients may be more likely to comply with homework when they agree with their therapist on the purpose of the task and the task requirements. These findings also support several clinical recommendations which have been made regarding developing homework assignments collaboratively with clients (Beck et al., 1979; Coon & Thompson, 2002; Tompkins, 2002). There was no evidence that the working alliance and homework compliance predicted treatment outcome for symptoms of psychosis. The authors interpreted these results within the context of previous studies which indicate that alliance and homework compliance are predictors of outcome. Dunn et al. (2006) concluded that these findings likely reflect the low sample size and insufficient power of analysis.

In a related study, Murdoch and Connor-Greene (2000) explored email as a means of improving client and therapist participation in homework assignments in order to examine if this technique enhances alliance and therapeutic impact. Two case studies were included in which the clients reported on their experiences with homework compliance, therapeutic alliance and the effectiveness of the task when prompted to complete homework or to submit it electronically.

One of the clients was a 24-year-old African American female seeking treatment for depression. The other client was a 19-year-old Caucasian female seeking treatment for an eating disorder. Both clients met with their therapist on a weekly basis, but engaged in between-session communication via email. A majority of the homework tasks were cognitive activities designed increase the opportunities for cognitive restructuring of irrational thoughts.

The clients' self-reports indicate that receiving frequent emails from the therapist facilitated the development of trust in their counselor because it was easier for them to believe the therapist genuinely cared about their progress. This may have enhanced the bond which Bordin (1979) argues is an integral component to the working alliance. The authors suggest that emailed correspondence between sessions may also strengthen the alliance because of the increased communication between client and therapist. They further suggest that this approach may be especially important for individuals who are reluctant to self-disclose in session as were the two clients included in these case studies.

Murdoch and Connor-Greene (2000) also reported that completion of homework was more likely to occur when the client knew that the therapist was waiting to receive written work electronically. According to the clients' self-reports, this approach extrinsically motivated them to complete a challenging task that would otherwise have been avoided. The clients also reported that being able to review previous emailed responses from their therapist enhanced their understanding of treatment gains which resulted from earlier tasks. Additionally, the opportunity to read and re-read the instructions for tasks not yet completed enhanced the quality of the homework they completed. These findings align with other studies which indicate that written instructions facilitate homework compliance (Cox et al., 1998; Helbig & Fehm, 2004; Scheel et al., 2004). Thus, emailing clients appears to have enhanced the effectiveness of cognitive and behavioral interventions by promoting compliance and efficacy of the task.

Murdoch and Connor-Greene (2000) concluded that email assignments may promote treatment outcome in several important ways. For these clients, the development of trust was a central component to establishing a working alliance of adequate quality. Receiving feedback between sessions appears to have conveyed the genuine concern that was necessary for the development of the therapeutic bond. Additionally, prompts from the therapist initially motivated the clients to complete homework in order to avoid disappointing the therapist; however, the treatment gains that the clients experienced as a result of completing homework gradually

enhanced intrinsic motivation for completion of later tasks. This led to increased engagement and participation from the clients who reported drastic treatment gains at termination. Furthermore, email assignments appear to have integrated the clients' and therapists' attention on the treatment goals as well as tasks which might promote attainment of these goals.

The results reported by Dunn et al. (2006) and Murdoch and Connor-Greene (2000) indicate that a relationship exists between working alliance and homework compliance. Although Dunn et al. (2006) report findings which indicate that working alliance predicts homework compliance, the case studies presented by Murdoch and Connor-Greene (2000) indicate that a bi-directional relationship may exist between these variables. Therefore, the direction of this relationship is unclear. While both studies indicate that alliance and homework compliance may interact in a way which impacts treatment outcome, Murdoch and Connor-Greene (2000) assert that client motivation may have an important role in how these working alliance and homework compliance influence psychotherapy outcome. The following section reviews findings on the relationship between working alliance and client motivation for therapy.

Working Alliance and Client Motivation

Investigations of working alliance and client motivation are few in number. Of the research available, a majority of findings indicate that a relationship exists between these variables. For example, Taft et al. (2004) report that client motivation predicts alliance. Other research indicates that the relationship between these variables may be more complex. For example, it has also been reported that the role of the working alliance may be most critical for clients with low motivation because the working alliance ameliorates the negative impact of poor motivation on outcome (Ilgen et al., 2006). Although these findings support the suggestion that there is a relationship between working alliance and client motivation, contradictory findings have also been reported (Polaschek & Ross, 2010). These results are reviewed in greater detail in the following section. Two of these studies reviewed below incorporate the transtheoretical model for conceptualization of client motivation (Ilgen et al., 2006; Taft et al., 2004). To date, no study has integrated SDT in an examination of the relationship between working alliance and client motivation. Two additional studies are reviewed in this section although they fail to include a theoretical orientation for interpreting client motivation and its relationship to working alliance (Calsyn et al., 2006; Polaschek & Ross, 2010). Despite this problem, most research

provides empirical support for the existence of a relationship between working alliance and client motivation.

In a study conducted by Taft and colleagues (2004), personality and interpersonal characteristics, motivational readiness to change, and demographic factors were examined as predictors of working alliance. The participants consisted of 107 men who engaged in group therapy for partner violence. All participants had documented cases of domestic abuse. Personality and interpersonal characteristics consisted of affective personality traits, antisocial features, borderline personality features, and a variety of interpersonal problem behaviors associated with these characteristics. The Safe-at-Home Instrument (Begun, Murphy, Bolt, Weinstein, Strodhoff, Short, & Shelly, 2003) integrated the transtheoretical model as an indicator of client motivation for treatment. Both the client and group therapist completed the WAI as measure of working alliance.

The results of this study indicate that higher motivation readiness correlated with client ratings of working alliance both early ($r = .43$) and late in therapy ($r = .42$). Motivational readiness correlated with therapist alliance in early ($r = .41$) and late ($r = .33$) stages of therapy as well. Psychopathic characteristics were negatively associated with client (r = -.35) and therapist (r = -.21) ratings of alliance late in therapy. Demographic factors were not significantly associated with alliance. Mediational analysis revealed that motivational readiness ($\beta = .38$) and psychopathic characteristics ($\beta = -.22$) were significant predictors of working alliance. Thus, higher motivational readiness predicted better alliance ratings whereas problematic personality characteristics predicted weaker alliance ratings. The authors report that motivational readiness was particularly important to the development of the alliance for these clients as it was the only client factor associated with all four sets of alliance ratings. Taft et al. (2004) interpret these results as evidence that clients who enter treatment with low motivation to change are unlikely to agree with their therapist on treatment goals and tasks. Furthermore, the authors suggest that low motivation clients are more likely to struggle in developing the therapeutic bond which is necessary for a strong alliance to occur. The authors recommend implementing motivational enhancement techniques when possible in order to facilitate development of the alliance as a means of enhancing outcome.

Ilgen and colleagues (2006) conducted a similar study on the relationship between alliance, motivation and outcome for individuals receiving treatment for alcohol use disorder. It

was hypothesized that outpatients with low motivation who received motivational enhancement therapy would experience a more positive outcome than those who engaged in cognitive behavioral therapy only. This hypothesis tested the assumption that low motivation clients are especially sensitive to the strength of the therapeutic relationship. Thus, it was anticipated that participants with low motivation would develop a stronger therapeutic alliance and experience more consistent adherence to treatment if they received motivational enhancement therapy.

The sample consisted of 785 outpatients. Alliance was assessed using the WAI. A version of the University of Rhode Island Change Assessment (URICA-A; DiClemente & Hughes, 1990) was used to assess motivation. This instrument is also based upon the transtheoretical model of motivation which uses stage of change as an indicator of client motivation. Drinking behaviors (percentage of days abstinent, drinks per day when not abstaining) were used to assess outcome. The results indicate that higher client motivation and more positive ratings of alliance independently predicted less alcohol use, although weak effects sizes were reported. Motivation predicted alcohol use at 6 months ($\beta = -.063$) and 12 months ($\beta = -.075$). Client ratings of alliance predicted alcohol use at 6 months ($\beta = -.003$) and 12 months ($\beta = -.001$). Therapist ratings of alliance also predicted outcome at 6 months ($\beta = -.005$) and 12 months ($\beta = -.004$). No significant interaction effect was reported for working alliance and client motivation however.

Ilgen at al. (2006) reported that the effects of alliance were strongest for participants with low motivation because the alliance offset the detrimental impact that low motivation may have on outcome. Additionally, the authors assert that clients with low motivation may be more likely to generate responses from their therapist in which the therapist adjusts to the clients' needs. This suggestion is supported by other research which integrates SDT (Lynch, Plant, & Ryan, 2005; Zeldman et al., 2004). Lynch et al. (2005) and Zeldman et al. (2004) suggest that court-mandated clients who are extrinsically motivated at treatment onset experience more autonomous motivation at termination when clinicians are supportive of their needs for autonomy and relatedness. Comparison of these studies with Ilgen et al. (2006) demonstrates how integration of SDT when conceptualizing client motivation can be advantageous to the transtheoretical model because SDT allows for enhanced interpretation of client motivation and its relationship to other process variables.

Both of the studies conducted by Taft et al. (2004) and Ilgen et al. (2006) use a stage of change approach to client motivation. Derivatives of this approach have also been implemented.

Some of these studies lack a theoretical basis for conceptualizing client motivation and have produced mixed results. Studies conducted by Calsyn et al. (2006) and Pollaschek and Ross (2010) are examples of how unclear conceptualization and unsophisticated measurement of client motivation yield mixed findings. These studies are reviewed below.

Calsyn and colleagues (2006) conducted an investigation of treatment efficacy for homeless community members. In this study client characteristics and treatment variables (transportation, individual counseling, assistance with activities of daily living, and contacts with the program) were assessed in order to identify predictors of working alliance. Participants included 115 clients diagnosed with schizophrenia and substance abuse who were homeless when receiving treatment. Working alliance was rated from the client and case manager perspective through administration of the WAI at months 3 and 15. Calsyn and colleagues (2006) conceptualized client motivation as combination of two related variables: readiness to change and willingness to seek help but provided no theoretical or clinical justification for this interpretation. Readiness to change and willingness to seek help were measured using items developed by the authors for the purpose of this study, which further limits interpretation of their findings. Outcome was measured as the number of days the clients had stable housing in the past month and self-report of monthly income.

Calsyn et al. (2006) reported that client motivation predicts working alliance. Specifically, readiness to change (r = .24) and willingness to change (r =.23) significantly predicted the client ratings of working alliance. The authors concluded that client motivation explained more variance in the client view of working alliance than the treatment variables. Alternately, the treatment (r = .16) and outcome variables (r = .19) emerged as the strongest predictors of alliance from the clinician perspective. Although this study has limitations regarding conceptualization and measurement of client motivation which are commonly found in the literature, the findings indicate that variables which have been interpreted as conceptually similar to client motivation are also correlated with working alliance.

In a recent study on the predictors of change for violent prisoners, Polaschek and Ross (2010) examined the influences of early-treatment therapeutic alliance, client motivation, and stage of change on treatment outcome. Although these authors designed a study which has clinical significance, the interpretation of these results is limited because of measurement problems. Specifically, therapist assessment of client motivation consisted of responding to a

single item on the Client Attributes Scale (Simpson, 1998). The participants included 50 men completing a prison sentence for violent offenses. Therapists, prisoners and observers assessed working alliance in weeks 2, 10, 18 and 26 with the WAI. Therapists also completed a Violence Risk Scale (VRS; Wong and Gordon, 2006) pre- and post-treatment in order to assess stage of change. The VRS has been used in previous research to predict recidivism.

These results indicated that the client and therapist ratings of the therapeutic alliance were strongly correlated ($r = .68$). The alliance grew significantly stronger with time. No association was reported between client motivation and working alliance. Additionally client motivation was not a significant predictor of outcome. The authors report that the prisoners whose alliance strengthened the most throughout treatment experienced better outcomes. Polaschek and Ross (2010) acknowledge that these results should be interpreted with caution. They further suggest that the alliance may be a means of enhancing motivation for treatment despite reporting findings which do not support this assertion. These suggestions indicate that the role of client motivation in therapy is valued by clinicians despite contradicting findings that there is no relationship between client motivation and either working alliance or outcome. This underscores the importance of including instruments which are theoretically and methodologically supported when conducting empirical investigation of client motivation. Furthermore, given that the sample consisted of court-mandated clients, it may have been more appropriate and informative to assess the participants' quality of motivation as indicated by earlier findings (Ilgen et. al., 2006).

In conclusion, the information available on the relationship between working alliance and client motivation is limited. Although there are indicators that client motivation predicts alliance (Calsyn et al., 2006; Taft et al., 2004), there are also indicators that the importance of the working alliance may vary with client motivation (Ilgen et al, 2006). Additionally, a lack of support for the existence of a relationship has also been reported (Polaschek & Ross, 2010), however the results of these studies should be interpreted with caution given the conceptualization and instrumentation weaknesses discussed above. Furthermore, it appears that more information is needed to better understand the relationship between working alliance and client motivation in relation to psychotherapy process and outcome. The following section summarizes the information presented above on homework compliance, therapist homework

delivery, client motivation, working alliance and outcome in order to clarify existing gaps in the literature.

Critical Analysis of the Literature

As discussed above, research indicates that patients who engage in homework benefit from their involvement in these assignments (Kazantzis et al., 2000; Kazantzis et al., 2005). Research also indicates homework compliance significantly predicts outcome (Burns & Nolen-Hoeksema, 1991; Burns & Nolen-Hoeksema, 1992; Edelman & Chambless, 1995; Leung & Heimberg, 1996; Neimeyer & Feixas, 1990; Kazantzis et al., 2000). Given these findings, several therapist homework delivery strategies have been recommended in order to improve client homework compliance (Freeman & Rosenfield, 2002; Kazantzis et al., 2005; Kazantzis & Lampropoulos, 2002; Tompkins, 2002). More information is needed regarding the frequency in which these strategies are employed by clinicians.

Research also indicates that client motivation for therapy predicts outcome (Michalek et al., 2004; Zeldman et al. 2004; Zuroff et al., 2007). Unfortunately, studies which lack an operational definition for client motivation or include insufficient assessment techniques abound in the literature. Self-determination theory (Ryan & Deci, 2000) provides a conceptual approach from which motivation can be operationally defined, measured and interpreted. More information is needed to examine the role of client motivation in relation to psychotherapy outcome as conceptualized within SDT (Ryan & Deci, 2008). Although preliminary investigations of the relationship between motivation for therapy and homework compliance indicate that a strong association exists between these variables (Curry et al., 1999; Helbig & Fehm, 2004), more information is also needed to clarify how these variables may interact with each other in treatment.

The working alliance is recognized by researchers and clinicians as a critical component of psychotherapy. Research indicates that working alliance predicts outcome (Kazantzis et al., 2000; Kazantzis et al., 2005). There are indicators that working alliance predicts homework compliance as well (Dunn et al., 2006). Initial findings also indicate that client motivation may predict alliance (Taft et at., 2004), however more information is needed to clarify the direction of this relationship and if an interaction exists. It was hypothesized that the relationships discussed in this review of literature would take the following form (Figure 1) when empirically studied.

Hypothesis

The literature on the relationships between homework compliance, therapist homework delivery behaviors, client motivation, working alliance and outcome reviewed in this chapter is represented by the proposed preliminary model below (Figure 1). Additional paths and alternating directions were considered, however the literature did not support these alternatives. The present study examined the following approximation of association as modeled:

- Autonomous motivation predicts treatment outcome.
- Autonomous motivation predicts homework compliance.
- Autonomous motivation predicts working alliance.
- Controlled motivation predicts treatment outcome.
- Controlled motivation predicts homework compliance.
- Controlled motivation predicts working alliance.
- Homework compliance predicts treatment outcome.
- Homework compliance mediates the relationship between autonomous motivation and treatment outcome.
- Homework compliance mediates the relationship between controlled motivation and treatment outcome.
- Working alliance predicts outcome.
- Working alliance predicts homework compliance.
- Homework compliance mediates the relationship between working alliance and treatment outcome.
- Therapist homework delivery predicts homework compliance.

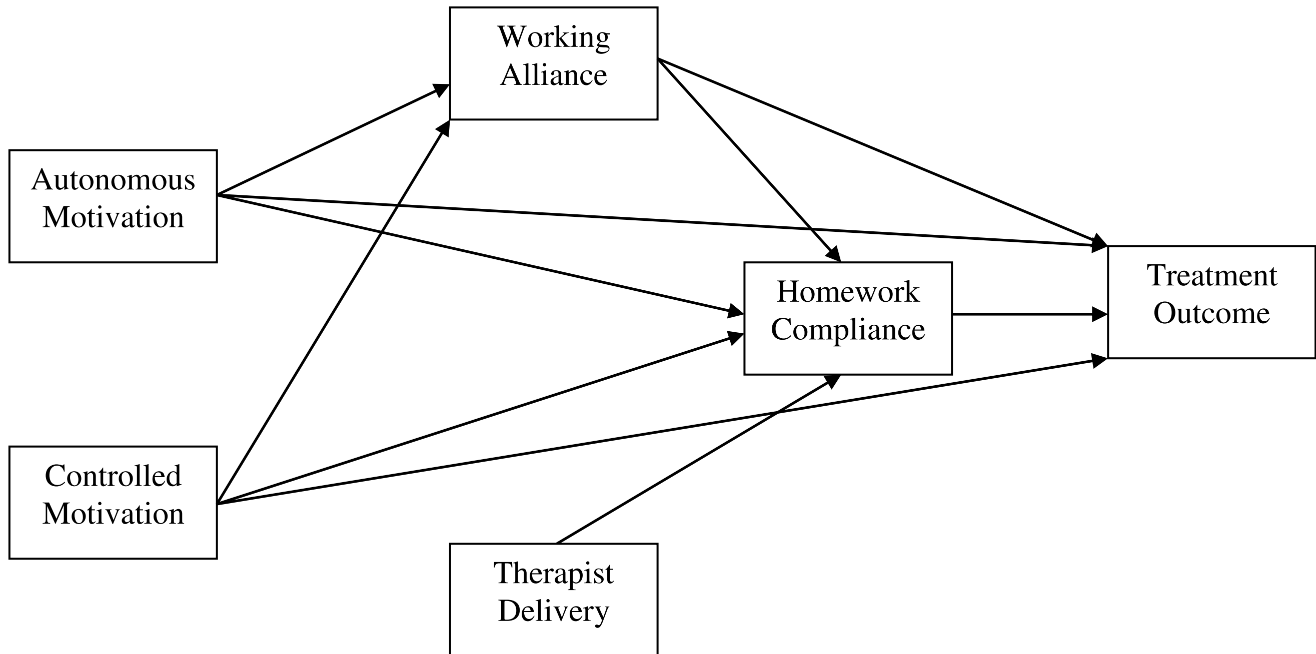

Figure 1: Proposed preliminary model. The hypothesized relationships between two types of client motivation for therapy, homework compliance, therapist delivery of homework assignments, working alliance and psychotherapy (treatment) outcome are presented.

Operational Definition of Terms

The following operational definitions were used in the present study:

- Homework: Tasks the client engages in outside of psychotherapy sessions which are designed to reinforce topics discussed in session; also referred to as between-session assignments or between-session activities.
- Homework Compliance: The quantity of the task requirements which were completed by the client, the quality of work completed by the client, and/or the level of engagement utilized by the client when attempting a homework task.
- Working Alliance: The relationship between a client and therapist which is a function of agreement on goals, agreement on tasks, and the existence of a therapeutic bond.
- Motivation: The energy and direction for an action which is based on the innate psychological need for autonomy.
- Autonomous Motivation: The energy and direction for an action or goal which is experienced as a free choice emanating from the self.

- Controlled Motivation: The energy and direction for an action or goal which is the result of internal and/or external pressures.
- Psychotherapy: The treatment of an emotional, behavioral, personality, or psychiatric disorder by a trained therapist through the use of verbal and nonverbal communication.
- Therapist: A trained clinician who studies mental processes and human behavior, in pursuit of or holding a Masters, Specialist, or Doctorate degree in psychology and pursuing licensure, licensed, or board certified in the state of practice.
- Therapist Homework Delivery: Techniques employed by a therapist while assigning a homework task with a client for whom the homework was designed.
- Outcome: Behavioral, cognitive and emotional changes in symptomatology which occur during psychotherapy.

CHAPTER III
METHODS

The purpose of this chapter is to describe the methods of the present study, "Client Motivation, Working Alliance and the Use of Homework in Psychotherapy." This study investigated client motivation for psychotherapy and the working alliance as predictors of outcome. Homework compliance was analyzed as a mediator of these relationships. Additionally, the influence of therapist delivery of homework tasks on client homework compliance was also investigated. The purpose of this study was to test a comprehensive preliminary model of factors (Figure 1) which contribute to psychotherapy outcome. This chapter begins with a review of the proposed model and continues with a description of the research design and variables of interest. Information is also presented on the measures, participants, procedures and data analysis included in this study.

Hypothesis

The literature on the relationships between homework compliance, therapist homework delivery, client motivation, working alliance and outcome supports the paths included in the proposed model, however no study to date has examined these variables simultaneously. The present study examined the following approximation of association in order to investigate the utility of this model:

- Autonomous motivation predicts treatment outcome.
- Autonomous motivation predicts homework compliance.
- Autonomous motivation predicts working alliance.
- Controlled motivation predicts treatment outcome.
- Controlled motivation predicts homework compliance.
- Controlled motivation predicts working alliance.
- Homework compliance predicts treatment outcome.
- Homework compliance mediates the relationship between autonomous motivation and treatment outcome.
- Homework compliance mediates the relationship between controlled motivation and treatment outcome.
- Working alliance predicts outcome.
- Working alliance predicts homework compliance.

- Homework compliance mediates the relationship between working alliance and treatment outcome.
- Therapist homework delivery predicts homework compliance.

Research Design

Descriptive and correlational data were collected through an electronic survey instrument completed by clients engaging in psychotherapy at three university counseling centers in different regions of the United States. Participants were clients who attended three or more individual counseling sessions. Structural modeling techniques were used to investigate the hypothesized relationships between client motivation, working alliance, homework compliance, therapist homework delivery and treatment outcome. Client motivation was examined as a predictor of outcome and homework compliance. Working alliance was examined as a predictor of outcome and homework compliance. Additionally, therapist homework delivery strategies were also examined as a predictor of homework compliance. Homework compliance was investigated as a mediator of the relationship between client motivation and outcome and the relationship between working alliance and outcome (Baron & Kenny, 1986). The current study employed path analysis in order to determine the suitability of the hypothesized model.

Variables

This section describes the variables of interest included in this study: homework compliance, client motivation, working alliance, therapist homework delivery and psychotherapy outcome. Homework compliance is discussed based on three types of task compliance which are commonly discussed and investigated in the literature: quantity of completion, quality of completion and level of engagement. Client motivation is conceptualized using SDT (Ryan & Deci, 1985; Ryan & Deci, 2008) which employs a comprehensive interpretation of the quality of motivation for task. Working alliance is presented according to Bordin's (1979) conceptualization of alliance: agreement on goals, agreement on tasks, and the therapeutic bond. Specific therapist behaviors which have been empirically investigated in the literature comprise therapist homework delivery. Lastly, outcome is discussed as the client's satisfaction in treatment and perceived change in symptomatology. Greater detail on these variables is presented below.

Homework Compliance

Homework compliance is operationally defined as the degree to which a client completes a between-session activity assigned by the therapist. Compliance has been interpreted in the literature as a function of the quantity and/or quality of the homework completed by the client between sessions. Quantity of homework compliance refers to the amount of the task which was completed. Quality of compliance reflects the thoroughness employed by the client while engaging in the homework task. In this study, homework compliance was defined as the quantity of the task requirements which were completed by the client, the quality of work completed by the client, and/or the level of engagement utilized by the client when attempting a homework task.

Client Motivation for Psychotherapy

According to SDT, motivation is based upon an innate psychological need for autonomy (Ryan & Deci, 1985). Client motivation for psychotherapy is conceptualized as lying along a continuum of autonomy which describes differences in the quality of motivation for behavior. SDT addresses the interconnectedness of motivation and autonomy by suggesting that people rely on intrinsic motivation when the need for autonomy is met. Intrinsic motivation is experienced when a behavior is selected for enjoyment and pleasure. The remaining types of motivation are conceptualized as either autonomous or controlled depending on the individual's regulatory style for the behavior. The present study operationally defined autonomous and controlled motivation according to the conceptualization of SDT.

Autonomous motivation. Autonomous motivation is experienced when a behavior is self-initiated, freely-chosen, and personally endorsed (Deci & Ryan, 1985). This form of motivation refers to the pursuit of goals which are recognized as personally meaningful. Autonomous motivation corresponds with the identified and integrated regulatory styles. When autonomous motivation for a behavior is experienced, an individual integrates the goal with his or her core values and beliefs.

Controlled motivation. Controlled motivation is required for activities that are considered irrelevant, unpleasant and/or required by societal expectations (Deci & Ryan, 1985). Controlled motivation corresponds with the external and introjected regulatory styles. Clients who experience controlled motivation for treatment may be influenced by intrapsychic forces such as feelings of guilt or shame. Additionally, controlled motivation is also experienced when

an individual engages in behaviors because of external pressures such as financial concerns or others' demands.

Working Alliance

The quality of the relationship between the therapist and client is referred to as the working alliance. The strength of the working alliance is considered an integral component of successful treatment outcome. Bordin (1979) identified aspects of the working alliance which are appropriate for all psychotherapy approaches. The present study operationally defined working alliance according to Bordin's (1979) description. As such, working alliance was conceptualized as a function of agreement on treatment goals established in therapy, assignment of tasks which facilitate the achievement of treatment goals, and the development of a therapeutic bond between the therapist and client.

Therapist Homework Delivery

The techniques and behaviors employed by a therapist when discussing homework were collectively referred to as therapist homework delivery in this study. Specific techniques of interest have been identified through review of the literature which indicates that these techniques enhance homework compliance (Scheel et al., 2004; Helbig & Fehm, 2004; Kazantzis & Lampropoulos, 2002; Cox et al., 1988; Worthington, 1986). Therefore, therapist homework delivery refers to empirically supported techniques which were investigated in the present study. Specifically, these techniques included: providing instructions of the task to the client, incorporating written material when giving instructions or using handouts, designing homework built on client strengths, and reviewing the client's experience with the homework task in the following session.

Treatment Outcome

The present study employed a conceptualization of treatment outcome from the client's perspective using specific aspects of the client's experience which have been investigated in the literature. Specifically, client satisfaction with treatment and client perception of change in behavioral, cognitive and emotional symptomatology have been used in previous research as a means of assessing psychotherapy outcome (Gelso & Johnson, 1983; Wood, 1980) and were used in the current study as well.

Measures

Client Motivation for Treatment Questionnaire

Participant's motivation for individual counseling was measured using The Client Motivation for Treatment Questionnaire (CMTQ). The CMTQ is a 12-item measure which assesses the client's motivation for psychotherapy according to the SDT conceptualization of motivation. A copy of the CMTQ is included in Appendix F. Items were originally developed by Williams and colleagues (1998) in an investigation of outpatient motivation for the management of diabetes. The original instrument, Treatment Self-Regulation Questionnaire (Williams et al., 1998) consists of the following prompt: "I take my medication as directed because..." and items which explore the controlled and autonomous reasons participants engage in diabetes treatment. This instrument was modified in later study which investigated clients' motivation for cognitive-behavioral therapy (CBT) for depression (Zuroff et al., 2007). Zuroff and colleagues called the modified instrument the Autonomous and Controlled Motivations for Treatment Questionnaire (ACMTQ;). The prompt was changed to: "I participate in CBT because..." followed by items which explore the same autonomous and controlled reasons for treatment within the context of psychotherapy as the original study conducted by Williams and colleagues (1998). For the purpose of the present study, the CMTQ presented a similar prompt: "I participate in counseling because..." followed by 11 items which are unchanged from the ACMTQ and one item in which "Managing my depression" was changed to "Managing my mental health" in order to include clients engaging in therapy for reasons other than depression.

The CMTQ asks participants to rate the extent to which they agree with controlled and autonomous reasons for engaging in therapy using a 7-point Likert scale (1 = Strongly Disagree, 7 = Strongly Agree). Two six-item subscales (autonomous motivation and controlled motivation) are present in the CMTQ. In accordance with SDT, the autonomous motivation items and controlled motivation items represent variations in the continuum of autonomy. Initial psychometric evidence of the ACMTQ was conducted using 125 outpatients receiving psychotherapy for treatment of depression (Zuroff, Koestner, Moskowitz, McBride, & Ravitz, 2005). Factor analysis resulted in two factors with 6 items loading on each. All 6 of the items which measure controlled motivation loaded at .61 or higher on the first factor, and this factor accounted for 29.6% of the variance in responses. All 6 of the autonomous motivation items loaded at .58 or higher on the second factor which accounted for 28.8% of the variance in

responses. Zuroff and colleagues (2005) reported that the internal consistency for the controlled motivation scale was $\alpha = .84$, the internal consistency for the autonomous motivation scale was $\alpha = .85$, and both scales were significantly correlated ($r = .32$). In the present study, internal consistency of the controlled motivation scale ($\alpha = .77$) and for the autonomous motivation scale ($\alpha = .80$) were both good. These subscales were significantly correlated ($r = .26$)

Working Alliance Inventory-Client, Short Form

Participants' perceptions of the working alliance were measured using the short form of the Working Alliance Inventory (WAI-S; Tracey & Kokotowitc, 1989). The WAI-S is a 12-item instrument which measures Bordin's (1979) concept of the working alliance from the client's perspective. A copy of the WAI-S is included in Appendix G. The original 36-item inventory (WAI; Horvath, 1981; Horvath & Greenberg, 1989) was created to measure alliance factors across varying treatment approaches and to examine factors which are thought to underlie working alliance. The original and short versions of the WAI consist of 3 subscales: Agreement on Goals, Agreement on Tasks, and Therapeutic Bond. The total score can be interpreted as an indicator of the overall strength of the alliance, with higher scores indicating a stronger alliance. Clients are asked to indicate their level of agreement with the 12 items using a 7-point Likert scale (1= Never, 7 = Always). The WAI is the most researched alliance measure available and results indicate that the instrument is a valid and reliable measure of working alliance (Horvath & Greenberg, 1989; Taft, Murphy, King, Musser, & DeDeyn, 2003). Internal consistencies for the WAI-S total score (.88-.97), agreement on goals subscale (.86-.93), agreement on tasks subscale (.80-.91) and therapeutic bond subscale (.85-.93) have been reported (Busseri & Tyler, 2003). The interchangeability of the WAI and WAI-S has been examined, with results indicating that both instruments have similar predictive validities (Busseri & Tyler, 2003). For the current sample, internal consistencies for the WAI-S total score ($\alpha = .90$), agreement on goals subscale ($\alpha = .72$), agreement on tasks subscale ($\alpha = .83$) and therapeutic bond subscale ($\alpha = .84$) were all good.

Homework Compliance Questionnaire

The instrument which was used to measure participants' homework compliance was designed for the specific purpose of this study and was developed based on extensive review of the literature on homework and on previous practitioner surveys (Kazantzis et al., 2005: Moore & Lampropoulos, 2010). Although homework compliance has been studied extensively in the

literature, no formal instrument has been developed which measures homework compliance. The Homework Compliance Questionnaire (HCQ) was created to assess the client's behavioral response to homework assignments. The HCQ is a 3-item measure which requires client participants to report their experiences with homework using a 5-point Likert-type scale (1 = Very Low, 5 = Very High). A copy of the HCQ is included in Appendix H. Previous research (Kazantzis et al., 2005: Moore & Lampropoulos, 2010) uses client self-report or therapist assessment of the following homework tasks: quantity of work completed, quality of work completed and level of engagement in the task. The HCQ asks clients to rate their average response to homework (quantity, quality, engagement) throughout treatment. Clients are also asked to report on the frequency with which tasks were assigned in order to gather descriptive information about the integration of homework. These HCQ items were designed to ask about firsthand experiences, ask one question at a time and were worded such that each participant will respond to the same question (Fowler, 1995). Additionally, questions were designed to be easily understood by participants as they do not include jargon which may only be understood by therapists. Research using the therapist versions of these items (quantity, quality, and engagement with homework) across their total clientele showed item intercorrelations ranging from .46 to .68 (Lampropoulos & Moore 2010), with quantity and quality item correlations for specific homework activities being much larger at r =. 86 (Moore & Lampropoulos, 2010). Research using client versions of the quantity and quality of homework completion items completed weekly for weight loss groups also showed a large average correlation of r =. 92 between these two items (Lampropoulos, Herman, & Dutton, 2011).

Prior to data collection, the HCQ was piloted with 2 doctoral students and 6 clients receiving treatment for the management of ADHD. All of the clients engaged in at least 5 sessions. Clients were asked to rate their average homework compliance (quantity, quality, engagement) during treatment thus far. The doctoral students serving as therapists rated their clients' average homework compliance throughout treatment. Preliminary correlations and reliability information were calculated in order assess for validity and internal consistency of the items. Internal consistency for the client version of the HCQ was $\alpha = .98$. Internal consistency for the therapist version of the HCQ was $\alpha = .88$. Additionally, client and therapist ratings of homework compliance were highly correlated ($r = .91$). Client and therapist assessment of the frequency of homework integration was also significantly correlated ($r = 1.0$) in this preliminary

analysis. For the current study total sample, internal consistency of the HCQ was also good (α = .88).

Therapist Homework Delivery Questionnaire

The instrument which was used to measure therapist homework delivery behaviors was developed for the purpose of this study as no formal instrument has been developed to date which aims to measure this variable. As such, items were designed and included based on an extensive review of the literature on homework, homework compliance, and therapist homework delivery behaviors. The Therapist Homework Delivery Questionnaire (THDQ) was used to assess the therapist's use of delivery techniques when assigning homework with their clients. The THDQ is an 8-item self-report measure which requires clients to recall their therapist's behaviors when assigning homework. Clients indicate their level of agreement with the items using a 5-point Likert-type scale (1 = Not At All, 5 = Completely). A copy of the THDQ is included in Appendix I. Items were developed in order to assess the following empirically-supported therapist behaviors: personalization of the task, description of the task, use of written materials, and follow-up on homework tasks. A composite score reflects the therapist's attention to these homework delivery techniques. These items were designed such that clients' are asked about firsthand experiences, clients are asked to respond to one question at a time, and items are worded such that each participant will answer the same question (Fowler, 1995). Additionally, items were designed to be easily understood by participants and refrain from using jargon which may only be understood by therapists.

Initial pilot data on the THDQ were collected from 2 doctoral students and 6 of their clients who were receiving treatment for the management of ADHD. All of the clients engaged in at least 5 sessions. Clients were asked to rate the therapists' delivery of homework tasks (personalization of the task, description of the task, use of written materials, and follow-up on homework tasks). The therapists also rated the delivery behaviors they employed when assigning homework. Items were modified slightly for the therapists in order to reflect their perspective. Internal consistency for the client version of the THDQ (used in the present study) was $\alpha = .85$. Internal consistency for the therapist version of the THDQ was $\alpha = .53$. Additionally, client and therapist ratings of therapist homework delivery behaviors were significantly correlated ($r = .91$).

The internal consistency of the THDQ for the present sample was examined and was found to be good ($\alpha = .82$). Additionally, the internal consistencies of the items which measured

different homework delivery strategies were also calculated. The internal consistencies for the items which measured personalization of the task (α = .78), description of the task (α = .83), the use of written materials (α = .84), and follow-up (α = .80) were also good. Thus, these results provide evidence that the items included in the THDQ measure the same construct in a consistent fashion. Furthermore, exploratory factor analysis with varimax rotation was conducted on the THDQ in order to examine is factorial structure. The pair of items which measured therapists' use of written materials appeared to load onto a different factor than the remaining 6 items which measured verbal homework delivery techniques. These results are presented in greater detail in Chapter 4, along with a discussion of the considerations which were made for selecting the most appropriate factor structure for the purposes of this study.

Follow-Up Questionnaire on Individual Counseling

The Follow-Up Questionnaire on Individual Counseling (FUQIC; Gelso & Johnson, 1983; Wood, 1980) is an 8-item instrument which measures outcome in counseling. The FUQIC has two scales: client satisfaction (feeling understood, helped and satisfied) and client perceived change in behavioral, cognitive and emotional symptoms (self-confidence, interpersonal relations, and ability to solve problems). Clients indicate their responses to the FUQIC items using a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree). A copy of the FUQIC is included in Appendix J. Internal consistency for the client satisfaction scale (α = .95) and perceived change (α = .86) have been reported (Tracey & Dundon, 1988). Test-retest reliability was found to range from r = .82 to .87 for the satisfaction scale and r = .64 to .85 for the perceived change scale (Wood, 1980). For the current sample, internal consistencies for the FUQIC (α = .88), client satisfaction scale (α = .78) and perceived change scale (α = .86) were all good. The client satisfaction scale and perceived change scale were highly correlated (r = .658, $p < .001$).

Participants

Sampling

The same for this study was undergraduate and graduate students receiving mental health services at university-based counseling centers across the United States. All adult clients who attended 3 or more individual counseling sessions were eligible to participate in the study. It was assumed that university students would have access to the internet and therefore would be

Table 1

Profile of Clients and Staff at the University Counseling Centers

	Florida State University	University of Memphis	University of Notre Dame
Student Enrollment	40,838	23,031	11,737
Licensed Psychologists	7	6	11
Licensed MHC	3	1	0
Licensed CSW	3	0	2
Psychology Residents	2	1	2
Pre-doctoral Interns	4	4	3
Pre-master's Interns	3	0	0
Practicum Counselors	0	7	4
Total Therapists	22	19	22
Therapist: Students	1: 1856	1: 1212	1: 533

Note. Data were obtained from official university office of admissions and counseling center websites. MHC = Mental Health Counselors; CSW = Clinical Social Workers; Therapist: Students = ratio of therapists to students at each site.

able to participate in the electronic data collection process. It was also anticipated that the clients invited to participate would represent a variety of mental health concerns. The university counseling center setting was selected because of the variation in skill of the therapists on staff (practicum students, interns, licensed counselors, licensed psychologists) and because these sites offer primarily individual counseling services. Table 1 provides data on the number of therapists at each site, the varying expertise of university counseling center staff and the total enrollment at each university. These data were collected from official university websites. Given that no data were collected from therapists, Table 1 provides an approximate description of the characteristics of the therapists who provided individual counseling to the participants of this study. Lastly, it is important to note that all three counseling centers included in this study house psychology predoctoral internships accredited by the American Psychological Association.

Characteristics of the Sample

Data were collected from 157 participants during a four month period of the 2011-2012

academic year. Four responses were from participants who gave informed consent to participate but did not provide responses to any remaining questions, therefore these responses were removed from the sample. Of the 153 remaining responses, 147 provided complete data. The participants consisted of 102 females (66.67%) and 51 males (33.33%). The age range of the participants was 18-53 years, with a mean age of 24.1 (*SD* = 6.54) years. The self-identified ethnic composition of the group was 94 European-American/Caucasian (61.44%), 30 African American (19.61%), 14 Hispanic/Latino (9.15%), 10 Asian American (6.54%), 4 Native American (2.61%), and 1 Asian (0.65%).

All of the participants were enrolled as full-time students. Of these individuals, 77 (50.33%) were enrolled at The Florida State University, 48 (31.37%) were enrolled at The University of Notre Dame, and 28 (18.30%) were enrolled at the University of Memphis. The sample consisted of 22 freshman (14.38%), 17 sophomores (11.11%), 21 juniors (13.73%), 37 seniors (24.18%), 27 master's students (17.65%), and 29 doctoral students (18.95%). A majority of the participants reported that they had never been married (124 or 81.08%), 12 were marred (7.84%), and few were separated (3 or 1.96%), divorced (4 or 2.61%) or widowed (1 or 0.65%). Of the 153 participants, 63 were unemployed (41.18%), 68 were employed part-time (44.44%), and 22 were employed full-time (22%). The number of sessions for the participants ranged from 3-75, with a mean of 10.39 (*SD* = 12.69). Table 2 compares the demographic information of the participants at the different counseling centers.

Participants were also asked to rate the how much their mental health problems negatively impacted their daily living using a 1-item Likert-type scale. Overall, 14 (9.15%) reported that they were extremely impacted, 30 (21.56%) were very impacted, 68 (44.44%) were moderately impacted, 33 (21.56%) were somewhat impacted and 8 (5.23%) were not impacted at all. This distribution is presented in Figure 2. The severity of the mental health problems for participants' from each counseling center is compared in Table 3.

Table 2

Participant Demographic Characteristics

	N	%	FSU	UM	UND
Total Participants	153	100	77	28	48
Gender					
Female	102	66.6	55	14	33
Male	51	33.3	22	14	15
Ethnicity					
European American/Caucasian	94	61.44	43	14	37
African American	30	19.61	19	11	0
Hispanic/Latino	14	9.15	10	1	3
Asian American	10	5.64	3	2	5
Native American	4	2.61	1	0	3
Pacific Islander	0	0	0	0	0
Other: Asian	1	0.65	1	0	0
Year in School					
Freshman	22	14.4	8	8	6
Sophomore	17	11.11	6	6	5
Junior	21	13.73	13	1	7
Senior	37	24.18	20	7	10
Master’s Student	27	17.65	19	3	5
Doctoral Student	29	18.95	11	3	15
Marital Status					
Never Married	124	81.45	62	24	38
Cohabitating	9	5.88	8	0	1
Married	12	7.84	5	3	4
Separated	3	1.96	1	1	1
Divorced	4	2.61	0	0	4
Widowed	1	0.65	1	0	0
Employment Status					
Unemployed	63	41.18	37	8	18
Employed Part-Time	68	44.45	34	17	17
Employed Full-Time	22	14.40	6	3	13

Note. FSU = Florida State University Counseling Center; UM = University of Memphis Career and Psychological Counseling Center; UND = University of Notre Dame Counseling Center.

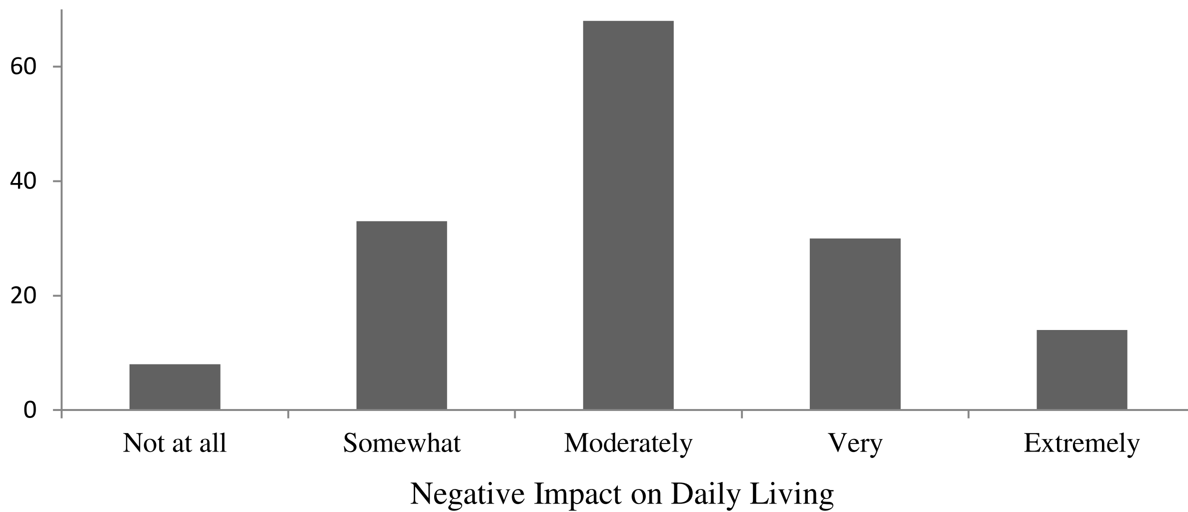

Figure 2. Participant ratings of their mental health severity. N = 153. Self-report data on mental health severity was gathered using a demographic questionnaire (Appendix E).

Table 3

Comparison of Client Mental Health Severity at the Counseling Centers

	N	%	FSU	UM	UND
Negative Impact					
Extremely	14	9.15	8	1	5
Very	30	21.56	13	8	9
Moderately	68	44.44	34	15	19
Somewhat	33	21.56	19	2	12
Not at all	8	5.23	3	2	13

Note. N = 153. Categories reflect the degree of negative impact participants' mental health problems had on their daily living. FSU = Florida State University Counseling Center; UM = University of Memphis Career and Psychological Counseling Center; UND = University of Notre Dame Counseling Center.

Procedures

Data Collection

Permission to conduct research was obtained from university counseling center directors and the institutional review boards of each university included in the study (Appendices L-O). Once this permission was granted recruitment flyers (Appendix B) were delivered to the counseling centers. The recruitment flyers included an internet link where the electronic survey could be easily accessed. The Florida State University College of Education Survey Management System was used to create the electronic survey which consisted of the questionnaires previously described. Eight additional items were included which were intended to gather demographic data

of the clients (Appendix E). This survey management system was used to disseminate the questionnaires and manage the data collected.

Receptionists at the Florida State University Counseling Center, Notre Dame University Counseling Center, and University of Memphis Career and Psychological Counseling Center were asked to distribute the flyers to clients when they checked in for their sessions for a period of 4 weeks. The receptionists were asked to make a brief statement explaining the voluntary nature of the study (Appendix C). After this 4 week period, approximately 75 participants had completed the survey. At this time, the receptionists were given a $50 gift card for distributing the recruitment flyers and were asked to place the remaining flyers in the waiting room of their counseling centers. No receptionists were asked to distribute flyers for a period of time which was longer than approved by university institutional review boards. Once the desired number of responses was obtained, the receptionists were asked to remove the remaining flyers from the waiting rooms.

Participants were offered a $10 electronic gift certificate for completing the survey. Participants who were interested in receiving the incentive submitted an email address where the electronic gift certificate was delivered (Appendix K). Participants were given the option to submit their responses to the survey without entering an email address as well. After the participants completed the survey, no follow-up contact was made unless the participant chose to include an email address for delivery of the gift certificate. Gift cards were delivered via an individualized email message thanking the participant for completing the survey. All gift cards were electronically distributed within three days of survey completion.

Data Analysis

Descriptive Statistics

Frequencies, means and standard deviations were calculated in order to provide descriptive information about participant demographics, client motivation, homework compliance, working alliance, therapist delivery of homework tasks and treatment outcome. Data were screened for normality as well.

Exploratory Factor Analysis

Exploratory factor analysis was conducted on the Therapist Homework Delivery Questionnaire in order to examine is factorial structure. The most appropriate factor structure was used for the path analysis.

Path Analysis

Path Analysis was used to determine the appropriateness of the hypothesized model. Path analysis was the SEM technique employed because each variable was measured using a single instrument and predictive relationships were thought to exist between these variables based on previous findings (Kline, 2005). Path analysis was used in the present study as a means of approximating the association of the variables included in the preliminary model. Path coefficients were reported in order to provide preliminary evidence for the relationships between the observed variables as modeled. The present study includes 6 observed variables (autonomous motivation, controlled motivation, working alliance, homework compliance, therapist homework delivery, outcome) which were hypothesized to correlate according to the proposed preliminary model (Figure 1). Therefore, 21 observations were included in the proposed model. Autonomous motivation, controlled motivation, and therapist factors were exogenous (independent) variables, and working alliance, homework compliance and outcome were endogenous (dependent) variables. The variances (3), covariances (3), direct paths (10), and variance of disturbances (3) total 19, therefore 19 model parameters were identified according to recommended guidelines (Kline, 2005). Because 21 observations and 19 free parameters were included, there were 3 degrees of freedom for the preliminary model.

The Statistical Analysis Software (SAS; SAS Institute, version 9.2) was used to generate covariance matrices, estimate path coefficients and examine model fit. The model chi-square (χ^2), root mean square error of approximation (RMSEA) and standardized root mean square residual (SRMR) was reported in order to assess and interpret model fit. Bentler comparative fit index (CFI) was also used to assess the overall fit of the model. Results of these fit indices, parsimony, and theoretical consideration were integrated to interpret model fit. Analysis included interpretation of parameter estimates for specific effects. Additional models were considered and the proposed model was respecified twice. Direct, indirect and total effects are reported (Table 8). The squared multiple correlation coefficient (R^2) was reported as an indicator of total variance in each variable explained by the model. Results were reported according to published guidelines (Hoyle & Panter, 1995; Boomsma, 2000; McDonald & Ho, 2002; Kline, 2005).

Mediation Analysis

Homework compliance was examined as a mediator of the relationships between autonomous motivation and outcome, controlled motivation and outcome, and working alliance

and outcome using procedures recommended by Baron and Kenny (1986) and Holmbeck (1997). Baron and Kenny (1986) list four steps in establishing mediated effects which Holmbeck (1997) later adapted for structural equation modeling techniques. The first step is to examine the path coefficients between each of the independent variables and the mediator. Secondly, each path coefficient between the independent and dependent variables must be examined. The third step was to examine the path coefficients between the mediator and each of the dependent variables. According to these procedures, if the path coefficients examined in steps 1-3 are significant in the directions predicted, the final step is to compare model fit. Holmbeck (1997) suggests that for each hypothesized mediation the association between the independent variable and the dependent variable should be constrained to zero to allow for model comparison with identical models in which the paths between the independent and dependent variable are not constrained. Path analysis revealed that no direct effects were observed for the dependent and independent variables, therefore a strong mediated model resulted and the procedure suggested by Holmbeck (1997) was simplified. Direct and indirect effects were calculated using MPlus version 5.21. These results are summarized in Chapter 4.

Power Analysis

An a priori power analysis was conducted using Preacher and Coffman's (2010) Computing Power and Minimum Sample Size for RMSEA website and the software R version 2.12.2 (The R Foundation for Statistical Computing, 2011). Specific model criteria are used to generate an ideal sample size in order to achieve desirable power. The criteria included in this power analysis were as follows: alpha was set at .05, 3 degrees of freedom were entered, an ideal power was set at .8, the Null RMSEA was entered as 0 (indicating a perfect model fit), and the alternative RMSEA was entered as .05 (indicating a reasonable/good fit).

Results of the estimation of sample size for RMSEA indicated that approximately 1457 participants would be needed to maximize the possibility of attaining a reasonable/good model fit according to the RMSEA model fit index. This high value is largely influenced by the degrees of freedom in the proposed model which is much lower than models which typically employ RMSEA sample size analysis. However, the degrees of freedom in the proposed model are a reflection of empirical findings in the literature which support the relationships as modeled. According to Kline (2005), models with 1 or 2 degrees of freedom are likely to call for thousands of participants, although this is not always feasible. Kline (2005) also notes that the estimated

probability that a model with poor-fit will be rejected is reduced even when very large sample sizes (N > 400) are used. As such, model fit indices, theoretical consideration and parsimony must be employed post-hoc when interpreting results of path analysis when a medium sample size (N = 100-200) is used. These methods were employed in the present study.

Sample size determination. Because power analysis for structural equation modeling can yield sample sizes which are often impractical, general guidelines have been referenced in order to facilitate the execution of needed research. Bentler (1985) recommends a ratio of participants to model free parameters of approximately 5:1 whereas Kline (2005) recommends that a ratio of participants to free parameters should be no more than 20:1 (Kline, 2005). The sample size of the current study (N = 153) meet these criteria.

Delimitations

Delimitations of the current study include lack of highly research measures to assess homework compliance and therapy homework delivery. As a result, the two relevant measures were developed based on close examination of previous items found in literature which investigates these variables. Initial pilot validation data were collected for these instruments and the internal consistency of the HCQ and THDQ items were examined again after data collection. Additionally, sample size presents a delimitation of the study. Sample size estimation using RMSEA power analysis software indicates that a larger sample is necessary in order to increase the power of the study for model specification and model comparison purposes. Although the data analysis procedures of the present study include the integration of model-fit indices and model respecification, it was anticipated that the most meaningful information will be generated through the simultaneous approximation of associations of the variables of interest. Given that effect sizes have been previously reported for the relationships as modeled, it was expected that the sample size (N=153) would be adequate for interpretation of path coefficients, which is the primary purpose of the study. Lastly, the sample included in this study includes university undergraduate and graduate students which limits the generalizability of findings.

CHAPTER IV

RESULTS

This chapter begins with a summary of the descriptive statistics for each variable included in the model. Exploratory factor analysis was conducted on the THDQ and the factor structure considered most appropriate was selected. Path analysis was used to investigate the fit of the preliminary model and the model was respecified twice. Individual path coefficients were examined and are reported within the context of the hypothesized relationships included in the preliminary model. This chapter presents the results of these analyses.

Data Preparation

Missing data. A total of 153 survey responses were collected. Of these responses, 146 (95%) were complete responses. Of these 153 participants, 7 did not complete the entire survey. As a result, 146 complete responses were included in the data analysis.

Descriptive Statistics

Analysis of the first item of the HCQ which measured frequency of homework use revealed that 92.5% of the total study sample (135 out of 146) reported that homework had been used in their current therapy (ranging from “rarely” to “almost always”), a percentage which is congruent with prior research which shows that most clinicians incorporate homework assignments as part of their treatment (Kazantzis et al., 2005). Specifically, 23.6% of clients indicated that it has been used “rarely”, 37.2% “sometimes”, 24.3% “often”, and 6.8% “almost always”. Only 12 clients (8.2%) responded “never”. However, because it was not clear if these clients did not use homework because it was not assigned by their therapist or because the clients themselves did not follow through with any assignments, and because the clients provided responses on the HCQ and TDHQ questionnaires, these data were included in the analyses.

Descriptive statistics were calculated for each variable. The mean, standard deviation, range, internal consistency, skewness and kurtosis for each measure are presented in Table 4. The Shapiro-Wilk test provided evidence of nonnormality such that significant right hand skewness and leptokurtic distribution was observed. These findings are denoted with an asterisk in Table 4. Data were examined using box plot analysis and the values which extended beyond the inner quartile range were investigated. Box plot analysis revealed that 4 characteristically different responses were provided to the Autonomous Motivation subscale of the CMTQ, 3 were provided for the WAI, 4 were provided for the HCQ, 6 were provided for the THDQ, and 2 were

Table 4

Descriptive Statistics for the Variables of Interest

	M	*SD*	Range	α	Skewness	Kurtosis
CMTQ						
Controlled Motivation	**3.61**	**1.20**	**1-6**	**.77**	**- .234**	**- .439**
Autonomous Motivation	**4.98**	**.81**	**1.83-6**	**.80**	**- .999***	**1.25***
Total	4.46	.73	2.75-6	.73	- .038	- .670
WAI						
Agreement on Goals	5.63	.936	2.25-7	.72	- 1.08*	1.20*
Agreement on Tasks	5.67	.905	2.50-7	.83	- .993*	1.03*
Therapeutic Bond	5.76	1.01	2.50-7	.84	- .974*	.615
Total	**5.69**	**.839**	**2.92-6.92**	**.90**	**- .908***	**.717**
HCQ						
Frequency of Homework	2.98	1.04	1-5	-	-.033	-.503
Quantity	3.16	1.10	1-5	-	- .327	- .199
Quality	3.22	1.09	1-5	-	- .360	- .268
Engagement	3.01	1.09	1-5	-	- .173	- .443
Total (3 items)	**3.13**	**.983**	**1-5**	**.88**	**- .501***	**.030**
THDQ						
Personalization of Task	3.29	.972	1-5	.78	-.415*	-.245
Description of Task	3.35	1.09	1-5	.83	-.402*	-.482
Use of Written Materials	2.14	1.34	1-5	.84	.810*	-.675
Follow-Up on Task	3.16	1.39	1-5	.80	-.083	-.728
Total	**2.97**	**.818**	**1-5**	**.82**	**-.158**	**.53**
FUQIC						
Client Satisfaction	4.22	.67	1.67-5	.78	-1.19*	2.22*
Perceived Change	3.81	.70	1.20-5	.86	-.502*	.937*
Total	**3.96**	**.63**	**1.38-5**	**.88**	**-.713***	**1.44***

Note. N = 146. Data printed in boldface are the measurements which were included in the structural equation modeling. Frequency of Homework, Quantity, Quality and Engagement are single items of the HCQ, therefore internal consistency data could not be calculated. CMTQ = Client Motivation for Treatment Questionnaire; WAI = Working Alliance Inventory; HCQ = Homework Compliance Questionnaire; THDQ = Therapist Homework Delivery Questionnaire; FUQIC = Follow-Up Questionnaire on Individual Counseling
* $p < .05$.

provided for the FUQIC. In order to determine if these 17 responses produced a leveraged effect on the model fit, the fit of the preliminary model with and without these responses was compared.

The model chi-square (χ^2) was higher with all data included ($\chi^2 = 17.56$, $df = 2$, p < .01, $N = 146$) as compared to the value with the l7 responses removed ($\chi^2 = 5.66$, $df = 2$, p = .05, $N = 129$), indicating better model fit when the smaller dataset was used. Additionally, the goodness of fit index (GFI) for the preliminary model with all data was .96, whereas the GFI for the model

with was .99 with data excluded, which also indicates better fit with the smaller data set. Thus, the 17 responses appear to have a leveraged effect on the fit of the preliminary model according to these fit indices. However, these results were expected given that chi-square and GFI assume normality of the data. Therefore, they are likely to be affected by datasets which have evidence of nonnormality.

As such, additional analysis was needed to determine if the 17 responses posed a leveraged effect on the significance and direction of the path coefficients within the model. No change in significance or direction of the paths was observed upon comparison of the path coefficients in the preliminary model with and without these 17 responses. Therefore, it was concluded that these responses did not pose a leveraged effect on the paths themselves. Examination of the 17 responses revealed that the participants who provided these data responded in a fashion which demonstrated consistent logic. As a result, it was determined that the 17 participants who provided these data endorsed characteristically different responses from a majority of the sample, however there was no evidence that these individuals responded randomly or in a fashion which would warrant exclusion from the study. Therefore, the data provided by these participants were retained in the dataset and model fit analysis was conducted using a total of 146 complete responses. The variance and covariance matrix for the sample is presented in Table 5. The correlation matrix for the sample is presented in Table 6.

Exploratory Factor Analysis

Exploratory factor analysis with varimax rotation was conducted on the THDQ in order to examine is factorial structure. Examination of the eigenvalues and scree plot revealed that two factors may be present. Six of the items loaded highly onto 1 factor (.63 - .80) whereas 2 of the 8items loaded onto a second factor (.90 - .92). Factor loadings are presented in Table 7. A single factor structure accounted for 47% of the variance in therapist homework delivery and a two-factor structure accounted for 67% of the variance in this variable. The items which loaded onto a second factor were items 5 and 6. These items were included in order to measure therapists' use of written materials. The remaining 6 items were included in order to measure verbal therapist homework delivery strategies. Given that the internal consistency ($\alpha = .82$) for the THDQ was good, it was determined that the emergence of 2 factors likely reflects differences in verbal and written therapist homework delivery strategies. Because therapist homework delivery was operationally defined as inclusive of all techniques employed by a therapist and the internal

Table 5

Variance and Covariance Matrix

	1	2	3	4	5	6
1. CMTQ – C	**1.39**					
2. CMTQ – A	0.22	**0.67**				
3. WAI	-2.36	3.37	**102.29**			
4. HWC	-0.84	0.32	8.34	**8.66**		
5. THDQ	-0.01	0.23	18.84	10.32	**43.16**	
6. FUQIC	-0.84	1.28	36.16	4.77	11.52	**25.41**

Note. N = 146. CMTQ – C = Controlled Motivation Subscale of Client Motivation for Treatment Questionnaire; CMTQ – A = Autonomous Motivation Subscale of Client Motivation for Treatment Questionnaire; WAI = Working Alliance Inventory; HCQ = Homework Compliance Questionnaire; THDQ = Therapist Homework Delivery Questionnaire; FUQIC = Follow-Up Questionnaire on Individual Counseling

Table 6

Correlation Matrix

	1	2	3	4	5	6
1. CMTQ – C	1.00					
2. CMTQ – A	.23**	1.00				
3. WAI	-.20*	.41**	1.00			
4. HWC	-.24**	.13	.28**	1.00		
5. THDQ	-.00	.04	.28**	.53**	1.00	
6. FUQIC	-.14	.31**	.71**	.32**	.35**	1.00

Note. N = 146. CMTQ – C = Controlled Motivation Subscale of Client Motivation for Treatment Questionnaire; CMTQ – A = Autonomous Motivation Subscale of Client Motivation for Treatment Questionnaire; WAI = Working Alliance Inventory; HCQ = Homework Compliance Questionnaire; THDQ = Therapist Homework Delivery Questionnaire; FUQIC = Follow-Up Questionnaire on Individual Counseling
*p < .05; **p < .001

consistency was good, one factor was considered most appropriate for the purposes of this study.

Path Analysis

Model fit. For this study, maximum likelihood estimation was used to estimate model parameters for path analysis using SAS Institute version 9.2 with Proc Calis available in SAS/STAT Module. Multiple fit indices were examined in order to assess overall fit of the preliminary, intervening, and final models. Badness of fit was assessed using the model chi-square (χ^2), the Steiger-Lind root mean square error of approximation (RMSEA) and the standardized root mean square residual (SRMR). Goodness of fit was assessed using the Bentler

Table 7

Factor Loadings for the Therapist Homework Delivery Questionnaire

	Factor Structure	
	1	2
Item 1	**0.79**	0.08
Item 2	**0.80**	0.08
Item 3	**0.77**	0.21
Item 4	**0.63**	0.50
Item 5	0.10	**0.92**
Item 6	0.03	**0.90**
Item 7	**0.71**	0.04
Item 8	**0.79**	0.01

Note. N = 146. Exploratory factor analysis with varimax rotation produced these factor loadings. Factor loadings > .50 are in boldface.

comparative fit index (CFI) and the goodness of fit index (GFI). The goodness of fit indices were used in conjunction with the badness of fit indices to assess the overall model fit. These results are presented below.

Preliminary model. Multiple fit indices were used to assess overall fit of the preliminary model (Figure 3). The model chi-square was statistically significant ($\chi^2 = 17.56$, $df = 2$, $p < .01$, $N = 146$), indicating that this model did not fit the data well. Similarly, the RMSEA for the model was .23 which was greater than the recommended cutoff score of .10 for samples smaller than 500 (Kline, 2005). Therefore, the RMSEA indicates that the preliminary model has poor fit as well. The SRMR for the model was .09, which is slightly less than the recommended cutoff score of .10 for samples smaller than 500 (Kline, 2005). Therefore, overall the badness of fit indices indicate that the model does not fit the data well. Examination of the goodness of fit index revealed different findings. The CFI was .93 which is greater than the cutoff score of .90 (Kline 2005), indicating reasonably good fit.

Therefore, examination of the fit indices indicates that the preliminary model does not fit the data well. Examination of the standardized path coefficients revealed that some of the paths in the preliminary model were significant whereas others were not. The following direct effects

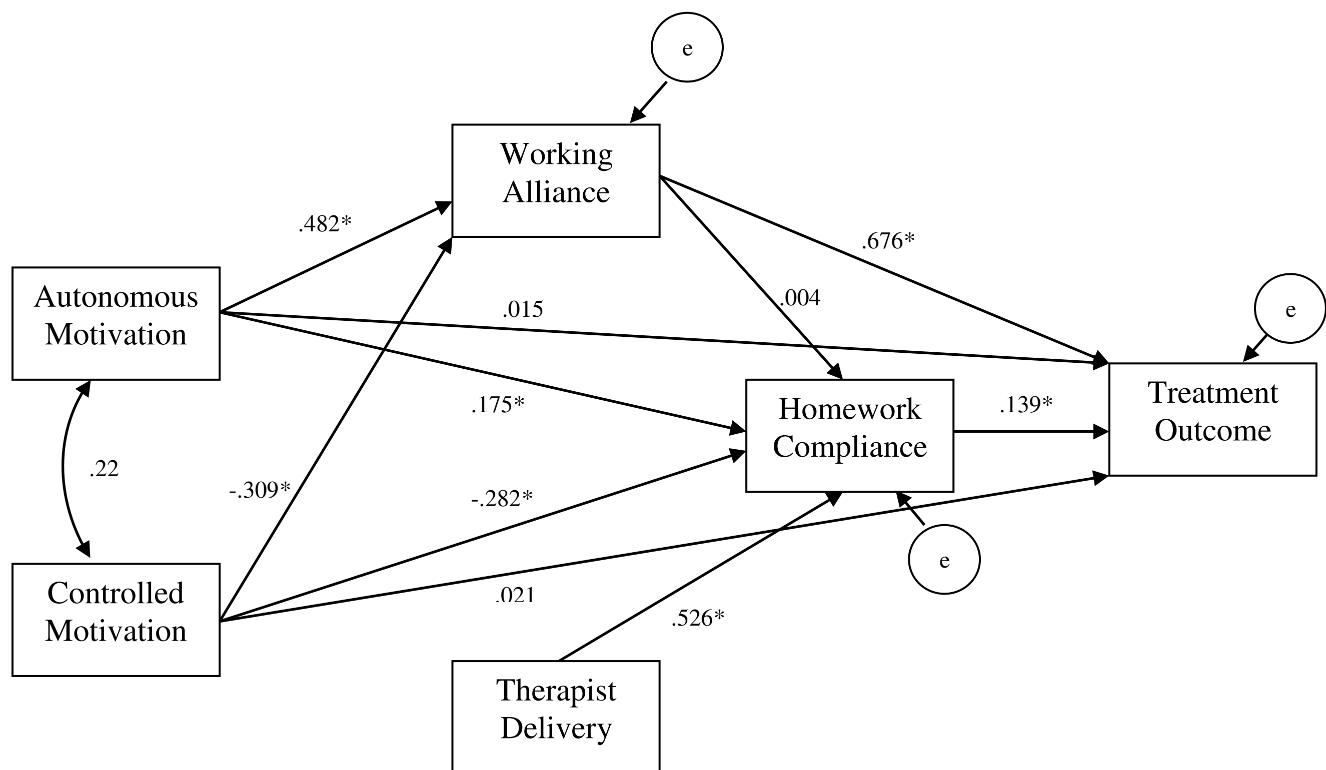

Figure 3. The preliminary model with standardized path coefficients for all hypothesized relationships.
* p < .05

were found to be nonsignificant: autonomous motivation on treatment outcome (ß = .015, p > .05), controlled motivation on treatment outcome (ß = .021, p > .05), and working alliance on homework compliance (ß = .004, p > .05). These findings will be discussed further in a later section of this chapter. Because 3 nonsignificant paths were estimated, the preliminary model was respecified. A second model was created with these 3 nonsignificant paths dropped. The resulting model was a strongly mediated model. Overall fit for the Model 2 was assessed. These results are presented below.

Model 2. Three nonsignificant paths were dropped from the preliminary model to create the Model 2 (Figure 4), reducing the model parameters as recommended (Kline 2005). For this model, the chi-square was also statistically significant (χ^2 = 17.80, *df* = 5, p < .01, *N* = 146), indicating that this model does not fit the data well. The RMSEA for the intervening model was .13 which is closer to the cutoff score than the preliminary model, but still indicates poor model fit (Kline 2005). Therefore, the badness of fit indices indicate that the intervening model does not fit the data well either. Examination of the goodness of fit index revealed similar results

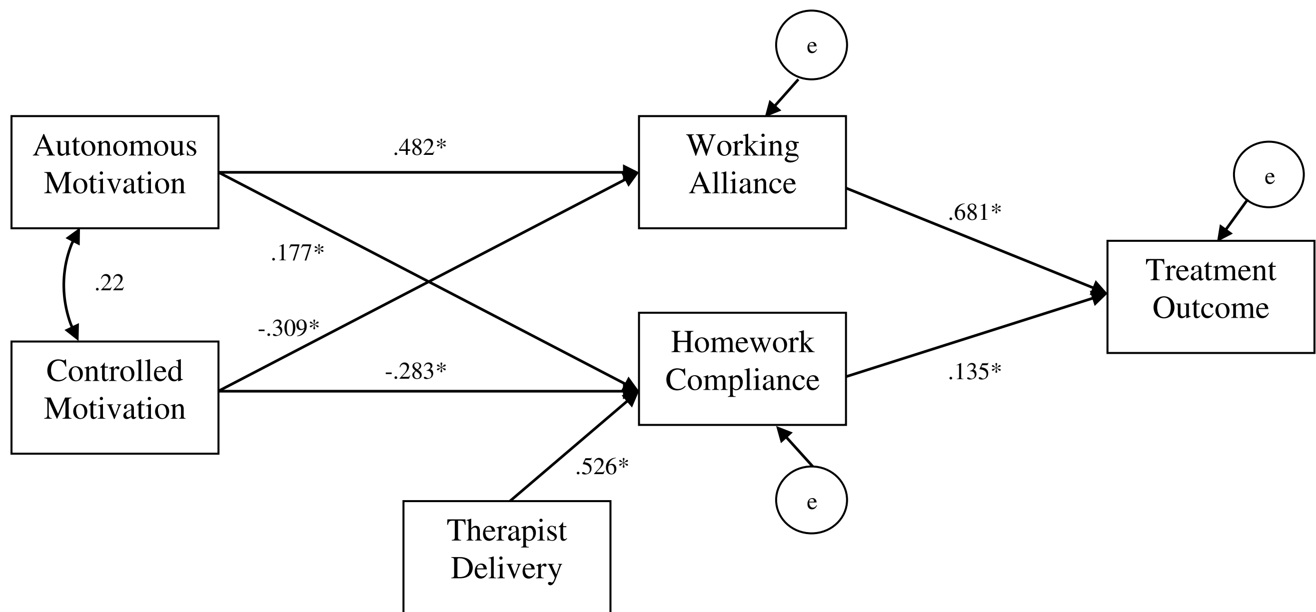

Figure 4. Model 2 with standardized path coefficients and nonsignificant paths dropped.
* p < .05

for Model 2 as compared with the preliminary model. The CFI was .94 which was also greater than the cutoff score of .90.

Overall, these results also indicate that Model 2 does not fit the data well either. Additional examination of data revealed the emergence of one significant relationship which was not hypothesized: therapist homework delivery significantly predicted working alliance for the sample (ß = .263, $p < .05$). No other significant relationships emerged. Thus, it was concluded that model fit was likely affected by the absence of a significant path. This relationship was considered to be an appropriate addition from a theoretical and clinical standpoint; therefore Model 2 was respecified such that this significant path was. The SRMR for Model 2 was also .09, which is still slightly less than the recommended cutoff. Overall fit of the third model was assessed and these results are presented below.

Model 3. Unlike the preliminary or second model, the chi-square statistic for the third model (Figure 5) was not statistically significant ($\chi^2 = 3.61$, $df = 4$, p = .05, $N = 146$). This indicates that Model 3 is not significantly different from a just-identified model and has good fit. For Model 3, the RMSEA was < .001 which indicates very close model fit with the population covariance matrix. Thus, little error of approximation was estimated for this model. Additionally,

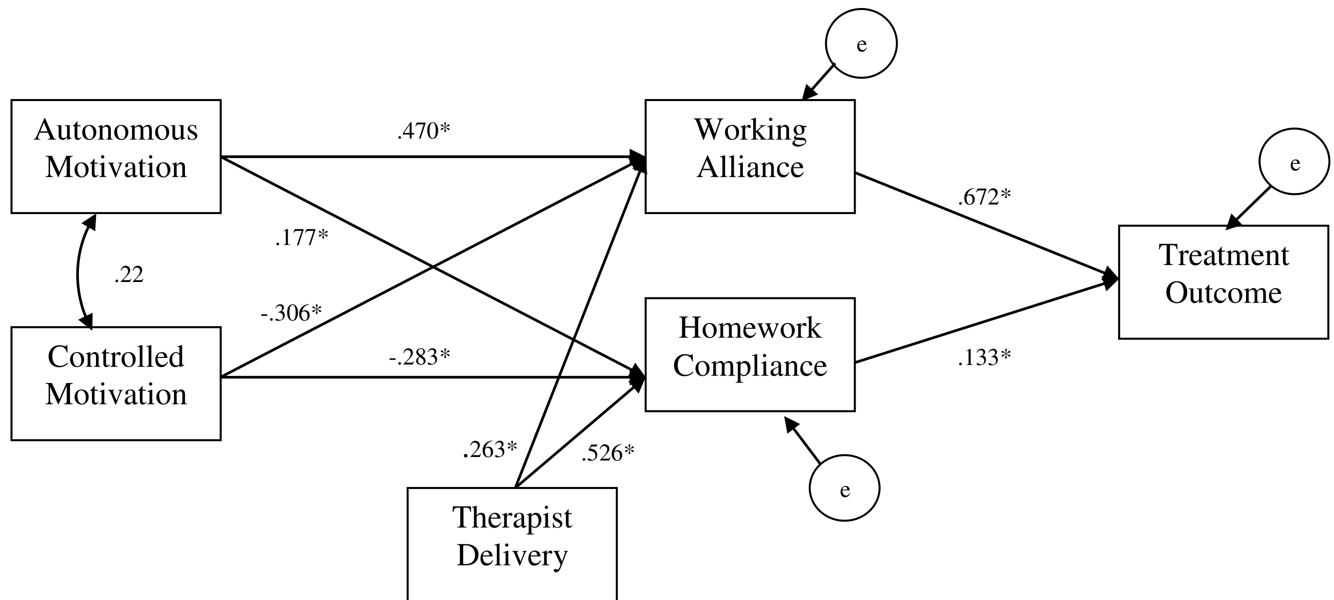

Figure 5. Model 3 with standardized path coefficients and the emergent relationship added. This model was identified as the final model.
*p < .05

the SRMR was .02 which indicates that there is little difference between the observed and predicted correlations in the correlation matrix generated by this statistic. Thus, the SRMR also indicated that this model fit the data well. Examination of the goodness of fit index also revealed that Model 3 fits the data well. The CFI was > .99, which was greater than the cutoff score of .90 and higher than the CFI values for the other models, therefore Model 3 had a reasonably good fit.

Model fit summary. For each of the models estimated, overall model fit was examined using badness of fit and goodness of fit indices. These results are compared in Table 8. Initial results indicated that the preliminary model required respecification as the fit indices showed that this model did not fit the data well. Examination of the path coefficients revealed that 3 of the hypothesized relationships were not significant, and thus were not supported by the data. These paths were dropped from the model to create Model 2 and the overall fit of this model was examined. Model 2 fit indices also showed that this model did not have good fit either. Additionally, the data indicated that a path should be added to the model as a significant relationship emerged which was not originally hypothesized. Theoretical and clinical judgment indicated that the addition of this path was conceptually appropriate, and Model 3 was developed with this path added. No other paths were added as this was not supported by the data, additional

Table 8

Comparison of Model Fit Indices

	$\chi2$	$\Delta\chi2$	RMSEA	SRMR	CFI
Preliminary Model	17.56*	-	.23	.09	.93
Model 2	17.80*	.24	.13	.09	.94
Model 3	3.61	14.49	< .001	.02	>.99

Note. N = 146. Model 3 was identified as the final model of the study. RMSEA = Root Mean Square Error of Approximation; SRMR = Standardized Room Mean Square Residual; CFI = Bentler's Comparative Fit Index; GFI = Goodness of Fit Index.
*p < .01

paths were not considered conceptually appropriate, and the fit indices for the Model 3 indicated very good model fit. For these reasons, Model 3 was identified as the final model of this study.

Overall variance explained. The squared multiple correlation coefficient (R^2) was used to examine the proportion of total variance of each endogenous variable which is explained by the final model (Kline, 2005). Results indicate that the final model accounted for 52% of the variance in treatment outcome. This is considered a large effect and similar values have been interpreted as practically significant in the mental health field (Thompson, 2002; Granello, 2007). Additionally, the final model accounted for 33% of the variance in working alliance and 37% of the variance in homework compliance.

Hypothesized Relationships

In addition to overall model fit, this study examined the relationships hypothesized to exist between the variables included in this study. Significant standardized path coefficients were interpreted as evidence of predictive relationships and these results are reported below. Additionally, homework compliance was examined as a mediator according to the methods outlined by Holmbeck (1997). MPlus version 5.21 was used to calculate direct and indirect effects following guidelines recommended by MacKinnon (2008). Direct and indirect effects are also presented in Table 9. The following section reviews the findings on the hypothesized relationships within the context of the preliminary and final models.

Autonomous motivation predicts treatment outcome. Analysis of the preliminary model revealed that the relationship between autonomous motivation and treatment outcome was not significant (ß = .015, p > .05). Thus, autonomous motivation did not significantly predict treatment outcome as was hypothesized. This path was not included in the final model.

Table 9

Standardized Direct and Indirect Effects of the Final Model

Relationship	Effects			
	Direct	P	Indirect	P
WA → TO	0.672**	<.001		
HWC → TO	0.133*	0.03		
AM → WA → TO			0.316**	<.001
AM → HWC → TO			0.024	0.089
CM → WA → TO			-0.206**	<.001
CM → HWC → TO			-0.038*	0.049
THD → WA → TO			0.177**	<.001
THD → HWC → TO			0.070*	0.032

Note. N = 146. AM = Autonomous Motivation; CM = Controlled Motivation; HWC = Homework Compliance; THD = Therapist Homework Delivery; TO = Treatment Outcome; WA = Working Alliance.
*p < .05, **p < .001

Autonomous motivation predicts homework compliance. Analysis of the preliminary model revealed that a significant, positive relationship exists between autonomous motivation and homework compliance (ß =.175, p < .05). Thus, greater autonomous motivation predicts greater homework compliance. This effect size was small. This path was retained in the final model and a similar effect size was observed (ß =.177, p < .05). Overall, greater autonomous motivation predicted greater homework compliance in this study.

Autonomous motivation predicts working alliance. Analysis of the preliminary model revealed that a significant, positive relationship exists between autonomous motivation and working alliance (ß = .482, p < .05). Thus, greater autonomous motivation predicts greater working alliance. A moderate effect size was found. This path was retained in the final model and a similar effect size was observed (ß =.470, p < .05).

Controlled motivation predicts treatment outcome. No significant relationship was found between controlled motivation and treatment outcome in the preliminary model (ß = .021, p > .05). Thus, controlled motivation did not significantly predict treatment outcome as hypothesized. This path was not included in the final model.

Controlled motivation predicts homework compliance. Analysis of the preliminary model revealed that a significant, negative relationship exists between controlled motivation and homework compliance ($ß = -.282$, $p < .05$) such that greater controlled motivation predicts lower homework compliance. The effect size for controlled motivation and homework compliance was small to moderate. This path was retained in the final model and a similar effect size was observed ($ß = -.283$, $p < .05$).

Controlled motivation predicts working alliance. Analysis of the preliminary model revealed that a significant, negative relationship exists between controlled motivation and working alliance ($ß = -.309$, $p < .05$) such that greater controlled motivation predicts weaker working alliance. The effect size for controlled motivation and working alliance was small to moderate. This path was retained in the final model and a similar the effect size was observed ($ß = -.306$, $p < .05$).

Homework compliance predicts treatment outcome. Analysis of the preliminary model revealed that a significant, positive relationship was found between homework compliance and treatment outcome ($ß = .139$, $p < .05$) such that greater homework compliance predicts better treatment outcome. This effect size was small. This path was retained in the final model and a similar effect size was observed ($ß = .133$, $p < .05$). The standardized direct effect of homework compliance on treatment outcome was .133 ($p < .05$).

Homework compliance mediates the relationship between autonomous motivation and treatment outcome. Analysis of the preliminary model revealed that a standardized indirect effect of .024 exists between autonomous motivation and treatment outcome; however, homework compliance was not a significant mediator of this relationship ($p > .05$). Therefore, homework compliance did not mediate the relationship between autonomous motivation and treatment outcome as hypothesized.

Homework compliance mediates the relationship between controlled motivation and treatment outcome. Analysis of the preliminary model revealed that a standardized indirect effect of -.038 exists between controlled motivation and treatment outcome. Additionally, homework compliance significantly mediated this relationship ($p < .05$). Thus, the negative impact of controlled motivation on treatment outcomes is mediated significantly by homework compliance.

Working alliance predicts treatment outcome. Analysis of the preliminary model revealed that a significant, positive relationship exists between working alliance and treatment outcome (ß = .676, $p < .05$) such that stronger working alliance predicted better treatment outcome. This effect size was found to be moderate to large. This path was retained in the final model and a similar effect size was observed (ß = .672, $p < .05$). The standardized direct effect of working alliance on treatment outcome was .672 ($p < .01$).

Working alliance predicts homework compliance. No significant relationship was found to exist between working alliance and homework compliance for the preliminary model (ß = .004, $p > .05$). Thus, working alliance did not significantly predict homework compliance as hypothesized. This path was not included in the final model.

Homework compliance mediates the relationship between working alliance and treatment outcome. As reported above, analysis of the preliminary model revealed that the relationship between working alliance and homework compliance was not significant therefore no indirect effects were possible. As such, homework compliance was not a significant mediator of the relationship between working alliance and treatment outcome.

Therapist homework delivery predicts homework compliance. Analysis of the preliminary model revealed that a significant, positive relationship exists between therapist homework delivery and homework compliance (ß = .526, $p < .05$) such that greater use of the therapist homework delivery strategies predicted greater homework compliance. This effect size was moderate to strong. This path was retained in the final model and the same effect size was observed (ß = .526, $p < .05$).

Additional Findings

A relationship which was not hypothesized to exist emerged during path analysis. Respecification of the preliminary model revealed that therapist homework delivery significantly predicts working alliance (ß = .263, $p < .05$) such that greater use of the therapist homework delivery strategies predicted greater homework compliance. A small to moderate effect size was found and this path was included in the final model.

Homework compliance emerged as a significant mediator of the relationship between therapist homework delivery and treatment outcome ($p <.05$). A standardized indirect effect of .070 was found for therapist homework delivery and treatment outcome.

Additionally, working alliance emerged as a significant mediator of three relationships within the model. No direct effects were estimated for these three relationships. A standardized indirect effect of 0.316 ($p < .001$) was found for autonomous motivation and treatment outcome, with working alliance emerging as a significant mediator of this positive relationship. The standardized indirect effect for controlled motivation and treatment outcome was - .206 ($p < .001$). Working alliance significantly mediated this negative relationship. Lastly, a standardized indirect effect of .177 ($p < .001$) was found for therapist homework delivery and treatment outcome, with working alliance emerging as a significant mediator of this relationship as well.

CHAPTER V

DISCUSSION

The purpose of the present study was to test a preliminary model of client, therapist and process factors which contribute to psychotherapy outcome. Specifically, client motivation and working alliance were examined as predictors of psychotherapy outcome. Homework compliance was examined as a mediator of these relationships. Additionally, therapist delivery of homework tasks was included in order to investigate the role that clinicians' behaviors may have on homework compliance. The Client Motivation for Treatment Questionnaire (Williams et al., 1998; Zuroff et al., 2007) was used to assess client motivation for psychotherapy according to the SDT conceptualization of motivation. The short form of the Working Alliance Inventory (Tracey & Kokotowitc, 1989) was used to assess Bordin's (1979) concept of the working alliance from the client's perspective. The Homework Compliance Questionnaire was used to assess the client's behavioral response to homework assignments. The Therapist Homework Delivery Questionnaire was created to measure therapist behaviors when assigning homework tasks. The factor structure of this instrument was examined. This chapter includes a summary of the findings within the context of prior research, limitations of the study, implications for practice, and recommendations for future research.

Summary of the Findings

In order to investigate the utility of the preliminary model, the relationships hypothesized to exist were examined simultaneously using path analysis techniques. This section includes a summary of the results reported in Chapter IV. These results are discussed within the context of the literature presented in Chapter II. This summary begins with a discussion of the results for each exogenous variable included in the model, followed by a discussion of the results for each endogenous variable.

Client Motivation

Autonomous and controlled motivation as predictors of treatment outcome. Few studies have examined client motivation for psychotherapy using a theoretical, qualitative perspective. Prior research which has incorporated SDT indicates that autonomous forms of motivation predict better treatment outcome and more controlled forms of motivation predict worse treatment outcome (Michalek et al., 2004; Zeldman et al., 2004; Zuroff et al., 2007). Contrary to these indications, no direct relationships were reported for autonomous motivation

and treatment outcome or controlled motivation and treatment outcome in the present study. Thus, neither autonomous motivation nor controlled motivation significantly predicted treatment outcome as hypothesized.

Given that client motivation for treatment was conceptualized and measured using the same theoretical construct, it is possible that these contradictory findings are due to differences in the measurement of treatment outcome. For example, Michalek et al. (2004), Zeldman et al. (2004), and Zuroff et al. (2007) operationally define treatment outcome as symptom reduction, incorporating pre-post measurements on instruments such as the Hamilton Rating Scale for Depression (Hamilton, 1960, 1967) which measure specific pathological symptoms. In the present study, changes in symptom reduction were measured differently. Clients were asked to retrospectively rate the improvement in their symptoms as evidenced by changes in self-confidence, interpersonal relations, and the ability to solve problems. In addition to change in symptoms, client satisfaction was also assessed as a component of treatment outcome. Further, outcome was assessed up to a specific point in time (which varied per participant), and not at the end of treatment. Thus, autonomous and controlled motivation may not have direct relationships with the aspects of treatment outcome measured in the present study. However, autonomous and controlled motivation appear to have significant predictive relationships with important process variables which enhance psychotherapy. These results are summarized in greater detail below and a discussion of indirect effects is included in the following sections which address mediation.

Autonomous and controlled motivation as predictors of homework compliance. As discussed in Chapter II, few studies have examined the relationship between client motivation and homework compliance. Prior research indicates that client motivation for treatment is an important factor for homework compliance (Curry et al., 1991; Helbig & Fehm, 2004). The results of the present study indicate that a greater autonomous motivation predicts greater homework compliance, whereas greater controlled motivation predicts lower homework compliance. Thus, the results of the present study are congruent with prior research which indicates that client motivation is related to homework compliance, however further comparison of these results with prior research is limited by conceptualization and measurement differences in client motivation. For example, Helbig and Fehm (2004) report that client motivation is

positively correlated with homework compliance, however differences between autonomous and controlled motivation were not examined.

Only one other study has examined differences in self-determined forms of motivation in relation to homework compliance. Curry and colleagues (1991) conducted a study on smoking cessation in which clients were divided into autonomous motivation and controlled motivation groups through the use of specific strategies designed to elicit these motivational orientations. These authors concluded that autonomously motivated clients demonstrated lower homework compliance than clients with more controlled forms of motivation. Thus, the findings from the present study appear to be contradictory to this prior research. However, it is important to note that Curry et al. (1991) did not measure differences in client motivation or conduct a regression analysis. Therefore it appears that comparison of the results from the current study with findings reported by Curry and colleagues (1991) is also somewhat limited. Given the treatment effects which have been reported for homework (Kazantzis et al., 2000), the results of the present study appear to indicate that autonomous motivation is more beneficial to the treatment process than controlled motivation. These findings are consistent with theory and clinical observation, which suggest that intrinsically motivated clients will participate in homework more than extrinsically motivated clients. Additional research is needed on this topic.

Autonomous and controlled motivation as predictors of working alliance. As predicted, both autonomous and controlled motivation significantly predicted working alliance. Results from the present study indicate that more autonomous forms of motivation strengthen the working alliance whereas more controlled forms of motivation weaken the working alliance. Therefore, differences in the quality of client motivation appear to have an impact on the working alliance which is widely considered the most clinically relevant component of psychotherapy outcome (Horvath & Symonds, 1991; Gaston, 1999; Martin et al., 2000; Castonguay et al., 2006).

A comparison of these findings with prior research reveals that similar results have been reported on the relevance of client motivation to working alliance (Taft et al., 2004; Calsyn et al., 2006). Taft and colleagues (2004) conclude that client motivation is a significant predictor of working alliance. Additionally, they suggest that a stronger working alliance is more likely to exist for clients who are motivated in ways which enhance client and therapist agreement on treatment goals and tasks. These authors further suggest that the quantity of client motivation

may account for these differences such that clients with a higher quantity of motivation are more likely to experience a stronger working alliance. However, other research indicates that clients with low motivation also experience strong working alliances with their therapists (Ilgen et al, 2006). The findings from the present study suggest that examination of qualitative differences in client motivation may provide further insight on the relationship between client motivation and working alliance. These data indicate that clients who are more autonomously motivated are more likely to agree with their therapist on appropriate treatment goals and tasks, and experience a stronger therapeutic bond than clients with more controlled forms of motivation. Although this topic warrants further empirical investigation, it appears that qualitative differences in client motivation exist and that these differences may have a clinically meaningful impact on the development of the working alliance.

Therapist Homework Delivery

Therapist homework delivery as a predictor of homework compliance. Several therapist homework delivery strategies have been recommended in the literature and research findings have supported the integration of these techniques (Worthington, 1986; Conoley et al., 1994; Bryant et al., 1999; Cox et al., 1998; Helbig & Fehm, 2004; Scheel et al., 2004). The results of the current study were congruent with this past research as therapist homework delivery significantly predicted homework compliance. This effect size was moderate to strong, indicating that the use of homework delivery strategies enhances homework compliance as recommended. These findings provide additional support for designing assignments which are based on client strengths, following-up on homework assignments in later sessions, and providing clear, written instructions on the homework task.

Therapist homework delivery and working alliance. The relationship between therapist homework delivery and working alliance has not been thoroughly investigated in the literature. As such, a relationship was not hypothesized to exist between these variables. Analysis of the data revealed that therapist homework delivery significantly predicts working alliance and a small to moderate effect size of .263 ($p < .05$) was reported. Although this relationship has not been studied in depth, it has been suggested that the use of homework delivery strategies may enhance client trust in the relationship, strengthening the therapeutic bond (Murdoch & Connor-Greene, 2000). Additionally, it is possible that appropriate homework delivery strategies enhance client agreement on therapy tasks and goals which is also likely to strengthen the alliance. Thus,

in addition to enhancing homework compliance, therapist homework delivery strategies also appear to strengthen the working alliance. The relationships between homework compliance and treatment outcome and working alliance and treatment outcome are discussed in the following sections.

Homework Compliance

Homework compliance as a predictor of treatment outcome. As discussed in Chapter II, a wide body of literature exists which examines the role of homework compliance. A majority of this research indicates that homework compliance predicts treatment outcome (Kazantzis et al., 2000). In the present study, homework compliance significantly predicted treatment outcome such that greater homework compliance predicted enhanced treatment outcome. Additionally, an effect size of .228 ($p < .05$) was reported. This value is similar to the effect size of .22 ($p < .05$) reported by Kazantizis and colleagues (2000). Furthermore, this relationship was unidirectional, as prior research has also indicated (Burns & Spangler, 2000; Kazantzis et al., 2000). Thus, the results of the present study are congruent with findings from earlier research on the relationship between homework compliance and treatment outcome.

Homework compliance as a mediator. The present study yielded mixed results on homework compliance as a mediator. It was hypothesized that homework compliance mediates the relationship between autonomous motivation and treatment outcome, however it was reported that homework compliance was not a significant mediator of this relationship. It was also hypothesized that homework compliance mediates the relationship between controlled motivation and treatment outcome. Results of this analysis revealed that homework compliance significantly mediated this relationship and an indirect effect of -.161was reported. Therefore, it is possible that controlled forms of motivation inhibit treatment outcome through noncompliance because treatment effects of homework are negated. Although no other study to date has examined homework compliance as a mediator of client motivation and homework compliance, these results appear to be congruent with previous research which examines the relationships between these variables. For example, Zeldman and colleagues (2004) report that greater extrinsic motivation predicts noncompliance with treatment and Kazantzis and colleagues (2000) report that homework compliance has a moderate effect on treatment outcome. Thus, the findings reported in this study appear to indicate that homework compliance is a significant

mediator of controlled motivation and treatment outcome, but is not a significant mediator for autonomous motivation and treatment outcome.

It was also hypothesized that homework compliance mediates the relationship between working alliance and treatment outcome. The data did not support the existence of a relationship between working alliance and homework compliance, therefore mediation was not possible. These findings are discussed in greater detail in a later section. Analysis of homework compliance as a mediator revealed additional findings that were not hypothesized. Homework compliance emerged as a significant mediator of therapist homework delivery and treatment outcome. A small indirect effect of .054 ($p < .05$) was found. Although this mediation was not hypothesized, it follows that homework compliance is the process variable which makes a relationship between therapist homework delivery and treatment outcome possible. The results of this study indicate that additional research is needed on the role of homework compliance as a process variable of client and therapist factors which are integral to psychotherapy. The relationship between therapist homework delivery and homework compliance is discussed in greater detail in the following section.

Working Alliance

Working alliance as a predictor of treatment outcome. Several studies have investigated the relationship between working alliance and treatment outcome, with results indicating that stronger working alliance predicts better outcomes (Horvath & Symonds, 1991; Marten et al., 2000). Results from the current study also show that working alliance significantly predicted treatment outcome and that a moderate to strong effect size of .676 ($p < .05$) was found. These results are congruent with prior research and provide additional support for the importance of the therapeutic relationship in psychotherapy.

Working alliance as a predictor of homework compliance. Bordin's (1979) conceptualization of working alliance includes agreement on therapy tasks such as those assigned for homework. Few studies have investigated the relationship between these process variables. Dunn and colleagues (2006) report that working alliance and homework compliance are significantly correlated, Murdoch and Connor-Greene (2000) suggest that bi-directional relationship may exist between these variables, and Carrol, Nich and Ball (2005) report that these variables were not significantly associated. In the current study, the relationship between working alliance and homework compliance was not significant. Although this relationship

appears to be relevant from a theoretical perspective, data from the current study indicate that working alliance may not enhance or inhibit homework compliance. More information is needed to clarify the roles of these process variables.

Working alliance as a mediator. The results of this study include additional findings on the role of the working alliance in psychotherapy. Few studies have examined working alliance as a mediator. Of the research which has addressed this topic, working alliance has been investigated as a mediator of relationships other than those examined in this study. A review of research on this topic yields mixed results. For example, prior research has shown that working alliance mediates the relationship between therapist empathy and treatment outcome in individual therapy (Wing, 2007). Other research has shown that working alliance is not a mediator for the relationship between session attendance and treatment effectiveness (Karno, 2007) or client interpersonal style and treatment completion (Saatsi, Hardy, & Cahill, 2006). Thus, mixed findings have been reported.

In the current study, working alliance was not hypothesized as mediator, however 3 highly significant indirect effects were found. It was hypothesized that the relationship between autonomous motivation and treatment outcome would be mediated by homework compliance, however results indicated that this relationship was strongly mediated by working alliance instead. Similar findings were reported for controlled motivation and treatment outcome as working alliance was also a significant mediator for this relationship. Additionally, the relationship between controlled motivation and treatment outcome appears to be more strongly mediated by working alliance than homework compliance. Lastly, working alliance emerged as mediator of the relationship between therapist homework delivery and treatment outcome. Thus, working alliance appears to be a strong mediator for both client and therapist factors included in the final model. Hilliard, Henry and Strupp (2000) suggest that an individual's interpersonal history impacts therapy outcome indirectly through the working alliance which significantly mediates this relationship. The results of the present study appear to indicate that this may be true for both the client and therapist, as working alliance significantly mediated the relationships between client motivation and outcome as well as therapist homework delivery and outcome. Thus, these findings provide additional evidence that working alliance may act as an important mediator between several client and therapist variables and treatment outcome. More information is needed to clarify the role of working alliance in psychotherapy.

Limitations and Delimitations of the Study

There are several threats to internal and external validity of this study. For example, interpretation of the factor analysis conducted on the Therapist Homework Delivery Questionnaire is a limitation of this study. The decision to use a single factor structure was based on the operational definition for therapist homework delivery as well as statistical analysis of the instrument's factor structure and reliability. Exploratory factor analysis indicated that a two-factor structure explained a greater percentage of the variance in therapist homework delivery than a single factor structure, however it was determined that a single factor structure was more appropriate for the purposes of this study. Given the difference in variance explained by a two-factor structure, it is possible that a two-factor structure may provide more accurate information on the role of therapist homework delivery strategies in relation to the other variables included in the model.

There are also delimitations in this study which present threats to its validity. First, although the sample size of this study (N = 147) meets the recommended guidelines of Bentler (1985) and Kline (2005), a priori power analysis indicated that a much larger sample size (N = 1457) was needed to achieve a power which would maximize the possibility of attaining a reasonable/good model fit according to the RMSEA model fit index. The power of the current study was calculated using Preacher and Coffman's (2010) Computing Power and Minimum Sample Size for RMSEA website and the software R version 2.12.2 (The R Foundation for Statistical Computing, 2011) and was found to be .14. Therefore, the statistical power of the current study is very low which indicates that the utility of the final model should be interpreted with caution. Although the sample sizes recommendations which result from the RMSEA model fit index statistic are often criticized for being impractical (Kline, 2005), it is recommended that a larger sample size be used to replicate this study.

The use of a criterion sample of university students was an additional delimitation. Individuals eligible to participate were required to have engaged in at least three individual sessions at their university counseling centers. Although three university counseling centers from different parts of the country were sampled, the generalizability of the findings is limited to adult clients who are also students receiving individual counseling at university counseling centers. Furthermore, the sample was 66.6% female which also limits generalizability within this group; however, genders were proportionally represented at roughly the same ratio as are typically

observed in counseling. Lastly, the study did not provide the opportunity to obtain exact therapist demographic and clinical information, nor detailed diagnostic client data.

The possibility of sampling bias in the data collection process is another delimitation of this study. An electronic gift card from Best Buy was offered as an incentive for participation, thus it is possible that this incentive appeared more strongly to some prospective participants than others. Therefore, it is possible that responses were received from individuals who shop at Best Buy and that individuals who do not may have been systematically deterred from participating. Additionally, it was assumed that a majority of students would have access to the internet. It is possible that the use of an electronic survey deterred individuals with restricted or limited access to the internet. It is also possible that an electronic data collection process deterred clients who may have felt uncomfortable using the internet or submitting responses online. However, most of these concerns are minimized given that participants were university students, who are assumed to have internet training and access at least through their universities.

Lastly, delimitations of this study include other measurement issues, such as the use of homework compliance and delivery measures with somewhat limited validation. However, initial validation of these measures in previous studies and in the present pilot and actual study are encouraging and supportive of their use. Further, the timing and measurement of outcome in this study differs from outcome measurement in other studies, due to clinical reality constraints. Outcome was measured at a point in time that varied for each participant ("up to that point in therapy") and not at the end of the treatment, and it was assessed based on client retrospective assessment of change (as opposed to pre-post measurements using symptom scales). Lastly, the use of only one perspective in assessing all the variables investigated, that of the client (and not therapist or outside rater perspectives), may have also influenced the results. However, it should be noted client perspective is considered the best perspective in measuring variables such as client motivation and the working alliance.

Implications for Clinical Practice

The findings from this study have implications for the practice of psychotherapy. As discussed in Chapter II, it appears that qualitative differences exist in client motivation for treatment. Thus, it is important that clinicians consider the conceptualization of client motivation as a qualitative, dynamic issue. Additionally, as prior research (Pelletier et al., 1997; Michalek et al., 2004; Zeldman et al., 2004; Zuroff et al., 2007) and the results from the present study

indicate, autonomous motivation may be more beneficial to treatment than controlled motivation. Therefore, it may be helpful for clinicians to integrate techniques which enhance autonomous motivation for treatment. Motivational Interviewing (MI; Miller & Rollnick, 2002) is a theoretical orientation which originated in the treatment of substance abuse. Since then, MI has been applied more broadly to enhance client motivation. A meta-analysis of 139 studies incorporating MI revealed that this treatment approach is efficacious, with 75% of the participants achieving improvement as a result (Lundahl, Kunz, Brownell, Tollefson, & Burke, 2010). Therefore, it is possible that MI strategies could be a useful means of enhancing autonomous motivation for psychotherapy.

Furthermore, the results from the current study are congruent with past research which indicates that working alliance is paramount to treatment outcome (Horvath & Symonds, 1991; Martin et al., 2000). Additionally, the findings from the current study indicate that the working alliance may serve as mediating variable for client and therapist factors and treatment outcome. Thus, it is critical that clinicians continue focusing on the establishment and maintenance of a strong working alliance. This may include processing any ruptures which occur, consulting with other clinicians, and regularly checking-in with the client to assess the status of the relationship. Furthermore, it has been suggested that SDT and MI can be used in a complementary fashion to enhance the working alliance (Sheldon, Joiner, Pettit, & Williams, 2003), and the results from the present study appear to support this recommendation.

This study provides also additional evidence for the inclusion of homework as a treatment component. Prior research shows indicates that moderate treatment effects exist for this technique (Kazantzis et al., 2000; Burns & Spangler, 2000), and the results of the current study are congruent with these findings. Thus, clinicians who use homework sparingly or not at all might consider including homework as a regular component of treatment for all clients. Additionally, specific homework delivery strategies have been recommended (Worthington et al., 1986; Conoley et al., 1994; Cox et al., 1998; Bryant et al., 1999; Tompkins, 2002; Helbig & Fehm, 2004; Scheel et al., 2004) and this study provides preliminary evidence which supports the inclusion of distinct homework delivery strategies. Specifically, it appears that clarifying instructions, using written materials, building tasks which are based on client strengths, and follow-up on homework tasks in subsequent sessions are homework delivery strategies which may enhance homework compliance, and thus treatment outcome.

Recommendations for Future Research

Although SDT is a theoretical orientation which has achieved substantial empirical support in the literature, few studies have incorporated this perspective in psychotherapy research. Instead, prior research has explored client motivation from a quantitative perspective, or has neglected to include a theoretical framework. The current study provides initial findings on the relationships between types of client motivation and other important process variables. These findings indicate that qualitative differences exist in client motivation for psychotherapy and that these differences may be clinically meaningful. As such, additional research which incorporates SDT into the conceptualization and measurement of client motivation may be used to inform clinical practice. Future research might also explore the potential influence of therapist behaviors and interventions such as MI techniques on autonomous and controlled motivation.

Furthermore, replication of this study with a different population of clients would provide additional evidence on the utility of the final model and the roles of the variables included in the model. The inclusion of clients who are students at other universities would enhance the generalizability of these findings. Additionally, the inclusion of participants who are not students and who engage in therapy at settings other than university counseling centers would provide a sample more representative of clients in general. Furthermore, it would be helpful to replicate this study and include additional client and therapist factors in the model in order to examine a more comprehensive view of the psychotherapy process. Comparison of different treatment approaches, such as MI and CBT, may also provide additional information on the utility of the final model. The use of additional outcome measures and measurement perspectives, and the replication of these findings with therapist data are also recommended.

This study investigated 4 therapist homework delivery strategies which have been recommended in the literature. An instrument was developed for the purpose of this study which examined the effects of these 4 strategies, and psychometric properties of this instrument were reported. Given that additional strategies exist which have not been investigated, further exploration of these homework delivery strategies is needed. Additionally, the development of an instrument which comprehensively measures therapist skillfulness in delivering homework tasks would aid this research endeavor. Given the treatment effects reported for homework, the information drawn from this research could be used to inform clinicians on strategies which enhance the integration of and compliance with homework tasks. Furthermore, the data collected

in this study represent the client perspective in psychotherapy. Thus, it may be helpful to develop an instrument which assesses therapists' perception of their skillfulness in assigning homework and clients' experiences in psychotherapy.

Implications for Theory

The results of this study appear to have some implications for SDT (Deci & Ryan, 2000). In response to the call to examine the utility of SDT in psychotherapy (Ryan & Deci, 2008), this theory was used to conceptualize and measure client motivation from a qualitative perspective with the intentions of clarifying the role of client motivation in relation to other psychotherapy variables. According to the results of the present study, client motivation appears to indirectly enhance psychotherapy outcome through the therapeutic relationship. Specifically, autonomous motivation appears to strengthen the working alliance whereas controlled motivation appears to weaken the alliance. Given the extensive research which supports the alliance as a mechanism of change (Horvath & Symonds, 1991; Marten et al. 2000), it appears that qualitative differences in client motivation are clinically important for the development of the working alliance, a variable which is widely considered to be a critical component of psychotherapy (Gaston, 1999; Castonguay, Constantino, & Holtforth, 2006).

In their discussion of SDT, Deci and Ryan (2002) identify autonomy, relatedness and competence as basic psychological needs which underlie one's motivation for specific behaviors. The findings from the present study suggest that clients may seek to meet these needs within the context of the working alliance and that autonomous forms of motivation may facilitate this process. It follows that clients may experience fulfillment of the needs for autonomy, relatedness and competence within the context of the therapeutic relationship and that this may further enhance client motivation to seek, develop and establish experiences outside of therapy which also promote the ongoing fulfillment of these basic psychological needs. Thus, the findings from the present study support the theoretical underpinnings of SDT in a situation-specific manner as qualitative differences in client motivation appear to influence the treatment of ongoing mental health issues through the therapeutic relationship.

Conclusion

In the present study, homework compliance was examined as a mediator of the relationships between autonomous client motivation and outcome, controlled client motivation and outcome, and working alliance and outcome. The influence of therapist homework delivery

strategies on homework compliance was also investigated. SDT was used in the conceptualization and measurement of client motivation in order to assess for qualitative differences in this construct. It was anticipated that autonomous motivation, controlled motivation, and working alliance would improve client engagement in homework tasks and that homework compliance would then enhance treatment outcome. A preliminary model was developed and this model was tested using data from 147 clients engaging in individual counseling at university counseling centers.

Structural equation modeling was used to test the utility of the preliminary model and the model was respecified using a combination of parsimony, judgment, and analysis of model fit indices. A final model was identified which showed very good fit to the data, however the statistical power of this study was low. The final model was a fully-mediated model as no direct effects were found between any of the exogenous variables and treatment outcome. Additionally, findings from this study indicate that qualitative differences exist in client motivation for psychotherapy. Specifically, it appears that autonomous motivation may enhance psychotherapy processes and outcome, whereas controlled motivation may impair psychotherapy processes and outcome. Furthermore, working alliance and homework compliance significantly predicted treatment outcome, acting as mediators in the model. Greater indirect effects were reported through working alliance than homework compliance. Lastly, working alliance did not predict homework compliance. The relationships between these variables warrant further investigation.

APPENDIX A

Email to Counseling Center Directors

The following email will be sent to university counseling centers should it become necessary to include additional sites in order to reach the sample size needed.

Dear Dr. ___________,

I am a doctoral candidate in the Combined Program in Counseling Psychology and School Psychology at The Florida State University. I am seeking the participation of university counseling centers for my dissertation research. The title of my study is "Client Motivation, Working Alliance and the Use of Homework in Psychotherapy." Representative data of clients' experiences is needed to contribute to a better understanding of the clinical utility of homework in therapy. Clients who are interested will be asked to take 10 minutes of their time to complete the survey online. It will be clearly explained in the recruitment flyer and consent form that their responses will in no way be connected to their counseling center services.

If you choose to allow your counseling center to participate in this research, a receptionist(s) on staff will be asked to provide a flyer (attached) to clients when they check in for their counseling session over a four-week period. The receptionist will be asked to make a brief statement about the voluntary nature of the clients' participation "Our counseling center is participating in a research study. Here is a flyer for a brief online survey that is completely optional if you are interested."). As a gesture of appreciation for their effort, the receptionists will be offered a $50 gift card. This is the extent of participation requested by your staff. No therapists will be asked to participate in any way.

There are no anticipated risks related to your counseling center or clients seeking services within your center. If you have any questions about this research you are encouraged to contact me. You can also contact my supervising professor, Georgios Lampropoulos. This project has been reviewed according to the Florida State University procedures governing human subjects research participation. If you have any questions regarding participants' rights in this research, you can contact FSU IRB at 2010 Levy Street, Research Building B, Suite 276, Tallahassee, FL 32306-2742, 850-644-8633, or jth5898@fsu.edu.

Sincerely,

Candice M. Franco, M.S.
Florida State University

Georgios Lampropoulos, Ph.D.
Florida State University

APPENDIX B

Recruitment Flyer

Research Participation Request

Dear Student,

If you have had **at least 3 individual counseling sessions with your current therapist**, you are invited to participate in a research study being conducted by a Florida State University doctoral candidate on factors which influence the outcome of psychotherapy. This study is **voluntary and your participation is entirely optional.** If you are interested in participating in this study, you will be asked fill out a brief electronic survey which will take approximately 10 minutes to complete. **Your participation will be completely confidential**. You will not be asked to enter your name at any point and no one from your university will see your responses. Once you have completed the survey, you will have the opportunity to **receive a $10 gift card** which will be sent to your email address, should you choose to provide this information. If you would like to receive the gift card, your email address will also be kept confidential.

To participate in this study, go to the following link:

Survey Link

APPENDIX C

Script Used When Distributing Flyers

The following statement will be made by the receptionist handing the solicitation flyer to the prospective participant:

"Our counseling center is participating in a research study. Here is a flyer for a brief online survey that is completely optional if you are interested."

APPENDIX D

Informed Consent Form

Dear Participant,

If you have had at least 3 individual counseling sessions with your therapist, your participation in a research project is requested. The title of the study is "Client Motivation, Working Alliance and the Use of Homework in Psychotherapy."

The research is being conducted by Candice Franco, a doctoral candidate in the Combined Program in Counseling Psychology and School Psychology at The Florida State University. The aims of the research are to gather information on the client and therapist variables in psychotherapy. If you decide to participate in this research, **you will be asked to complete an electronic survey which will take approximately 10 minutes to complete**. You will be asked to briefly reflect on your motivation for therapy, your relationship with your therapist, your participation in therapeutic homework, and your therapist's discussion of therapeutic homework.

Your consent to be a research participant is strictly voluntary and should you decline to participate or should you choose to drop out at any time during the study, there will be no adverse effects on you or your therapy. You are free to exit the survey at any time with no consequences. **You will not be asked to enter your name anywhere on the survey.** Your participation in this study would be in no way connected to nor will it affect the counseling services you are receiving now or may receive in the future.

There are no anticipated risks related to your participation in this study. The benefits to you for participating may include reflecting on the progress of your therapy and your role in this progress. Your participation in this study may help our understanding of how client and therapist factors impact therapy outcome.

The survey is confidential to the extent allowed by law. **No identifying information will be requested unless you choose to receive a $10 electronic gift card for your participation. If you would like to receive this gift card, you will be asked to provide an email address where the electronic gift card can be sent once the survey has been completed.** You may participate in the study without providing an email address, however you will not be able to receive the gift card without providing an email address. Once you receive your electronic gift card, you will not be contacted again. Your email address will not be shared or distributed in anyway. Your IP address will not be tracked. You will not be asked for your name or any other personally identifying information in the survey.

If you have any questions about this research you are encouraged to email the researcher, Candice Franco. You may also contact her research supervisor, Georgios Lampropoulos. This project has been reviewed according to the Florida State University procedures governing human subjects research participation. If you have any questions regarding your rights as a participant in this research, you can contact FSU IRB at 2010 Levy Street, Research Building B, Suite 276, Tallahassee, FL 32306-2742, or 850-644-8633.

Voluntary Consent:

If you would like to participate in this study, please indicate your consent by checking the box below:

□ I have read the above statement and consent to participate in this study. I understand that I may exit the survey at any time by simply closing the window.

APPENDIX E

Client Demographics Questionnaire

1. What is your gender?

1. Male	2. Female

2. Which ethnic group do you identify with the most? (Please select one.)

1. African-American	5. Native American
2. Asian-American	6. Pacific Islander
3. European-American/Caucasian	7. Other (specify) _____________
4. Hispanic/Latino	

3. How old are you? ___________ years

4. What is your current academic status? (Please select one.)
   1. Enrolled part-time
   2. Enrolled full-time
   3. Not currently enrolled

5. What year are you in school? (Please select one.)

1. Freshman	4. Senior
2. Sophomore	5. Masters Student
3. Junior	6. Doctoral Student

6. What is your marital status? (Please select one.)

1. Never married	4. Separated
2. Cohabitating with partner	5. Divorced
3. Married	6. Widowed

7. What is your employment status? (Please select one.)
   1. Unemployed
   2. Employed part-time
   3. Employed full-time

8. How much do the mental health issue(s) you are working on in counseling negatively impact your daily living?

1. Not at all	4. Very
2. Somewhat	5. Extremely
3. Moderately	

9. Which state do you currently live in? ___________________

10. How many individual counseling sessions have you had with your current therapist thus far?
____

APPENDIX F

Client Motivation for Treatment Questionnaire

There are a variety of reasons why people participate in counseling. Please read over the statement below and indicate how much you agree or disagree with each reason using the scale provided.

I PARTICIPATE IN COUNSELING BECAUSE...

1 Strongly Disagree	2 Moderately Disagree	3 Slightly Disagree	4 Neutral	5 Slightly Agree	6 Moderately Agree	7 Strongly Agree

1. Other people would be upset with me if I didn’t.	1	2	3	4	5	6	7
2. I personally believe that it is the most important aspect of my becoming well.	1	2	3	4	5	6	7
3. Managing my mental health allows me to participate in other important aspects of my life.	1	2	3	4	5	6	7
4. I want others to see that I can follow my treatment.	1	2	3	4	5	6	7
5. I have chosen to make counseling an important part of my weekly life.	1	2	3	4	5	6	7
6. I would be ashamed of myself if I didn’t.	1	2	3	4	5	6	7
7. Mostly, I want my therapist to think that I am a good client.	1	2	3	4	5	6	7
8. I feel personally satisfied when I follow my treatment.	1	2	3	4	5	6	7
9. I would feel guilty if I didn’t do what my therapist said.	1	2	3	4	5	6	7
10. I have carefully thought about counseling and I believe it is the most important thing I can do to get better.	1	2	3	4	5	6	7
11. Participating in counseling is an important choice that I really want to make to become well.	1	2	3	4	5	6	7
12. I don’t want other people to be disappointed in me.	1	2	3	4	5	6	7

APPENDIX G

Working Alliance Inventory – Client, Short Form

Instructions: There are sentences below that describe some of the different ways you might think or feel about your counselor. As you read the sentences mentally insert the name of your counselor in place of **_____________** in the text. Below each statement there is a seven point scale:

1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always

If the statement describes the way you *always* feel (or think) circle the number 7; if it never applies to you, circle the number 1. Use the numbers in between to describe the variations between these extremes. Work quickly, your first impressions are the ones we would like to see. PLEASE DON'T FORGET TO RESPOND TO EVERY ITEM.

1. _______________ and I agree about the things I will need to do in counseling to help improve my situation.

1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always

2. What I am doing in counseling gives me new ways of looking at my problem.

1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always

3. I believe _______________ likes me.

1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always

4. _______________ does not understand what I am trying to accomplish in counseling.

1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always

5. I am confident in _______________ 's ability to help me.

1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always

6. _______________ and I are working towards mutually agreed upon goals.

1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always

7. I feel that _______________ appreciates me.

1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always

8. We agree on what is important for me to work on.

1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always

9. _______________ and I trust one another.

1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always

10. _______________ and I have different ideas on what my problems are.

1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always

11. We have established a good understanding of the kind of changes that would be good for me.

1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always

12. I believe the way we are working with my problem is correct.

1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always

APPENDIX H

Homework Compliance Questionnaire

1. How often have you used homework in counseling with your current therapist?

Never Rarely Sometimes Often Almost Always

Please describe your *average response* to homework using the scale below.

1 = Very Low 2 = Low 3 = Moderate 4 = High 5 = Very High

2. On average, how would you describe your level of <u>engagement</u> in homework activities up to this point in therapy?	1	2	3	4	5
3. On average, how would you rate your <u>degree of completion</u> (quantity) of homework activities up to this point in therapy?	1	2	3	4	5
4. On average, how would you rate your <u>quality</u> of completion of homework activities up to this point in therapy?	1	2	3	4	5

APPENDIX I

Therapist Homework Delivery Questionnaire

Using the following scale, please rate how often your therapist did the following behaviors when discussing agreed upon homework activities with you up to this point.

1 = Not at All   2 = Somewhat   3 = Moderately   4 = Very Much   5= Completely

1. Homework activities were developed based upon my strengths.	1	2	3	4	5
2. Homework activities were personalized to my ability level.	1	2	3	4	5
3. Tasks involved in the homework activities were described clearly and concretely.	1	2	3	4	5
4. Instructions for the homework activities included specific details.	1	2	3	4	5
5. Written description or instructions of the homework activities were provided.	1	2	3	4	5
6. Handouts or worksheets were provided as homework activities.	1	2	3	4	5
7. My experiences with the homework activities were asked about during the next session.	1	2	3	4	5
8. Lessons learned from the homework activities were summarized and integrated into treatment.	1	2	3	4	5

APPENDIX J

Follow-Up Questionnaire on Individual Counseling

Instructions: Please use the following scale to indicate your degree of agreement and disagreement to each of the items below.

1 = Strongly Disagree   2 = Disagree   3 = Undecided/Neutral   4 = Agree   5 = Strongly Agree

1. In session, my counselor understood my concerns.	1	2	3	4	5
2. In session, my counselor helped me resolve my concerns.	1	2	3	4	5
3. I am satisfied with the results of my counseling thus far.	1	2	3	4	5
4. As a result of counseling, I feel better about myself.	1	2	3	4	5
5. As a result of counseling, I relate better with others.	1	2	3	4	5
6. As a result of counseling, I accomplish things I need to do.	1	2	3	4	5
7. As a result of counseling, I think more clearly.	1	2	3	4	5
8. As a result of counseling, others act better towards me.	1	2	3	4	5

APPENDIX K

Email Address Collection for Optional Participation Incentive

The following statement will appear on the penultimate page of the survey:

Dear Participant,

If you are interested in receiving an electronic $10 gift card, enter an email address where it can be delivered in the textbox below. Your email address will be kept completely confidential and will not be shared with anyone. **As stated in the consent form, you are not required to enter your email address below as part of your participation in this study**. However, if you would like to receive the gift card, an email address must be provided where it can be delivered. If you choose to provide an email address, you will not be contacted again after the gift card has been delivered.

□ I would like to receive an electronic $10 gift card for my participation in this study.

Enter your email address where your gift card can be sent:________________________

□ I choose not to enter my email address.

APPENDIX L

Florida State University Institutional Review Board Approval Letter

Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2742
(850) 644-8673, FAX (850) 644-4392

APPROVAL MEMORANDUM
Date: 10/7/2011
To: Candice Franco
Dept.: EDUCATIONAL PSYCHOLOGY AND LEARNING SYSTEMS
From: Thomas L. Jacobson, Chair

Re: Use of Human Subjects in Research
Client Motivation, Working Alliance and Homework Compliance in Psychotherapy

The application that you submitted to this office in regard to the use of human subjects in the research proposal referenced above has been reviewed by the Human Subjects Committee at its meeting on 04/13/2011. Your project was approved by the Committee.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which may be required.

If you submitted a proposed consent form with your application, the approved stamped consent form is attached to this approval notice. Only the stamped version of the consent form may be used in recruiting research subjects.

If the project has not been completed by 4/11/2012 you must request a renewal of approval for continuation of the project. As a courtesy, a renewal notice will be sent to you prior to your expiration date; however, it is your responsibility as the Principal Investigator to timely request renewal of your approval from the Committee.

You are advised that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report, in writing any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the Chair of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is FWA00000168/IRB number IRB00000446.

Cc: Georgios Lampropoulos, Advisor
HSC No. 2011.6169

APPENDIX M

University of Notre Dame Institutional Review Board Approval Letter

Notre Dame Human Subjects
Institutional Review Board
PROTOCOL REVIEW

REVIEW DATE: 5-16-2011 Protocol No: 1'-339

x Full Committee Expedited Review

Principal Investigator: Candice M. Franco Department: College of Education

Georgios Lampropoulos

Protocol Title: Client Motivation, Working Alliance and the Use of Homework in Psychotherapy

[ ] Exempt

[x] Approved Effective Until: **5-13-2012**

[ ] Deferred for additional information. See comments:

[ ] Not approved. See comments:

COMMENTS:

APPENDIX N

University of Memphis Approval Letter

THE UNIVERSITY OF MEMPHIS
Institutional Review Board

To: Candice M. Franco
Career & Psychological Counseling Center
From: Chair, Institutional Review Board
For the Protection of Human Subjects
irb@memphis.edu
Subject: Client Motivation, Working Alliance and the Use of Homework in Psychotherapy (102411-911)

Approval Date: October 27, 2011

This is to notify you of the board approval of the above referenced protocol. This project was reviewed in accordance with all applicable statuses and regulations as well as ethical principles.

Approval of this project is given with the following obligations:

1. At the end of one year from the approval date, an approved renewal must be in effect to continue the project. If approval is not obtained, the human consent form is no longer valid and accrual of new subjects must stop.
2. When the project is finished or terminated, the attached form must be completed and sent to the board.
3. No change may be made in the approved protocol without board approval, except where necessary to eliminate apparent immediate hazards or threats to subjects. Such changes must be reported promptly to the board to obtain approval.
4. The stamped, approved human subjects consent form must be used. Photocopies of the form may be made.

This approval expires one year from the date above, and must be renewed prior to that date if the study is ongoing.

Chair, Institutional Review Board
The University of Memphis

Cc: Dr. Jane Clement

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BIOGRAPHICAL SKETCH

Candice Franco Layman was born in Miami, Florida. She earned a Bachelor's of Science in Biology and a Bachelor's of Arts in English from The University of Miami (FL) in 2002. After graduating, she taught elementary and middle school science in Miami Shores, FL for 5 years. During this time, she earned a Master's of Science in Movement Science with a Sport Psychology Concentration from Barry University (Miami Shores, FL). She also became an avid runner, completing 2 marathons, finishing several half-marathons and becoming a runner sponsored by Niketown. In 2007 she went on to study sport psychology at Florida State University (Tallahassee, FL) and completed her Ph.D. from the Combined Program in Counseling Psychology and School Psychology in 2012. Candice completed her predoctoral internship at the University of Memphis Career and Psychological Counseling Center (Memphis, TN) with long-term career goals which included working at a university counseling center, opening a private practice, and serving special populations such as children, adolescents, and athletes. She married her husband, Charles Calvin Layman in 2010. They are overjoyed to have the most loving Golden Retriever (Walker) and Chocolate Labrador (Kona Bean) on the planet.