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A Meta-Analytic Review of the Association of Therapeutic Alliance, Therapist Empathy, Client Attachment Style, and Client Expectations with Client Outcome

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A Meta-Analytic Review of the Association of Therapeutic Alliance,
Therapist Empathy, Client Attachment Style, and
Client Expectations with Client Outcome

Alberto Soto

A dissertation submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

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ABSTRACT

A Meta-Analytic Review of the Association of Therapeutic Alliance, Therapist Empathy, Client Attachment Style, and Client Expectations with Client Outcome

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Doctor of Philosophy

The therapeutic alliance has consistently been associated with improved client outcomes across numerous psychotherapy outcome studies. Previous systematic reviews have, however, evaluated the univariate association of the alliance with client outcome. The present meta-analytic review examines the association of the alliance with improved client outcomes after accounting for the presence of therapist empathy, client attachment styles, and client expectations. Across 23 independent studies, the alliance, adjusted for the presence of the other variables, remained as the most robust predictor of improved outcomes $r = .258$ ($SE = .01$, $p < .001$), with a 95% confidence interval of $r = .18$ to $r = .33$. After accounting for therapeutic alliance, therapist empathy was a small but statistically significant predictor of improved outcomes. These findings provide the first attempt at synthesizing multivariate estimates of the contribution of the alliance with improved outcomes when in the presence of empathy, client attachment style, and client expectations. The findings presented here suggest the superordinate nature of the alliance as a variable that exists on a separate conceptual level from the other variables evaluated.

Keywords: Therapeutic alliance, empathy, attachment style, client expectations, psychotherapy, psychotherapy outcomes

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TABLE OF CONTENTS

ABSTRACT.....	ii
ACKNOWLEDGMENTS.....	iii
TABLE OF CONTENTS.....	iv
LIST OF TABLES.....	vi
LIST OF FIGURES.....	vii
CHAPTER: Introduction.....	1
CHAPTER 2: Review of Literature.....	5
Psychotherapy Outcomes.....	5
The Therapeutic Alliance.....	8
Factors to Consider in the Association Between Alliance and Client Outcome.....	12
Attachment style.....	12
Client expectations for improvement.....	14
Therapist empathy.....	16
Conceptual and experiential overlap among the alliance and other factors.....	17
CHAPTER 3: Method.....	26
Literature Search.....	26
Inclusion/Exclusion Criteria.....	28
Data Coding.....	29
Inter-Rater Reliability.....	30
Computation of Effect Sizes.....	30
Data Analyses.....	32
Evaluation of Possible Publication Bias.....	34
Examination of Moderation.....	35
CHAPTER 4: Results.....	37
Descriptive Characteristics.....	37
Analyses of the Association Between Therapeutic Alliance and Client Outcomes.....	37
Assessment of Possible Publication Bias.....	38
Client Expectations, Therapeutic Alliance, and Client Outcomes.....	39

Therapist Empathy, Therapeutic Alliance, and Client Outcomes.....	40
Client Attachment Styles, Therapeutic Alliance, and Client Outcomes.....	41
CHAPTER 5: Discussion.....	43
Overview of Major Findings for the Therapeutic Alliance	45
Overview of Findings for Client Expectations, Attachment Styles, and Therapist Empathy.....	45
Therapeutic Alliance as a Superordinate Construct.....	46
Limitations.....	48
Future Directions.....	54
Conclusion.....	58
References.....	60
APPENDIX: Coding Sheet.....	84

LIST OF TABLES

Table 1	<i>Literature Search Results Across 16 Variables Associated with Psychotherapy Outcomes</i>	78
Table 2	<i>Studies with Overlapping Data by Topic</i>	79
Table 3	<i>Characteristics of 23 Studies of the Association Between Attachment Styles, Client Expectations, Therapist Empathy, Therapeutic Alliance and Outcome</i>	80
Table 4	<i>Univariate Analyses Across Variable</i>	83

LIST OF FIGURES

<i>Figure 1</i>	Proposed theoretical interaction between variables.....	89
<i>Figure 2</i>	Flow chart of studies included in meta-analysis.....	90
<i>Figure 3</i>	Effect size estimates for the adjusted therapeutic alliance values.....	91
<i>Figure 4</i>	Forest plot of adjusted therapeutic alliance effect sizes.....	92

CHAPTER 1: Introduction

Mental illness has been recognized as a growing health-related concern (Nock, Hwang, Sampson, & Kessler, 2010). An estimated 26% of the U.S. population experiences a mental health disorder in any given year (Kessler, Chiu, Demler, & Walters, 2005). Given the pervasiveness of mental illness and the need to reduce associated distress, some individuals may seek informal or nonprofessional treatment for their mental health concerns, such as through culturally sanctioned healing rituals, religious or spiritual guidance, or other holistic forms of treatment (Calabrese, 2008; Krause & Hayward, 2013; McCubbin & Marsella, 2009). While these informal forms of interventions may produce potential benefits, professional forms of treatment such as psychotherapy, medication, or a combination of both are widely practiced by psychologists and other professional healthcare providers (Lambert & Archer, 2006).

Outcome studies have established that medication is effective in treating psychiatric conditions (D'yakonov & Lobanova, 2014; Samara, Cao, Helfer, Davis, & Leucht, 2014; Smith & Glass, 1977), and other empirical findings have provided evidence for the effectiveness of psychotherapy (Lopez & Basco, 2014; Smith & Glass, 1977; Ulvenes et al., 2012). Scholars have continued to examine the question of the overall efficacy of psychotherapy, as well as related areas of inquiry that logically follow, such as which modality is most efficacious and examining the curative components of psychotherapy.

Research over the last several decades has emphasized the examination of the relationship of various factors as they relate to psychotherapy outcomes. Some of these important variables have been identified as relational factors (e.g., therapeutic alliance) while others have been identified as process factors (e.g., assigning homework, fostering insight, reality testing). Both relational and process factors have been associated with improved

psychotherapy outcomes (Norcross & Lambert, 2011; Norcross & Wampold, 2011a). Of these variables, the therapeutic alliance has received the most emphasis in the literature and has consistently been established to be associated with improved client outcomes (Horvath, Del Re, Flückiger, & Symonds, 2011). Although there are clearly multiple factors that contribute to improved outcomes, research studies typically examine only one important factor (e.g., therapeutic alliance) at a time. Such univariate analyses, while certainly providing useful information, may not accurately estimate the unique variance explained by variables that may be related to, or distinct from, the therapeutic alliance.

Research often examines variables one at a time outside of their context, yet the reality is that many client, therapist, and therapeutic factors all exert their influences simultaneously and influence one another. Examining individual variables and evaluating their association with client outcome may therefore overestimate their effects, or, conversely, may underestimate seemingly non-significant variables. Additionally, conceptual and operational overlaps assuredly abound in the data. For instance, the concept of therapeutic alliance overlaps with the constructs of therapist empathy and positive regard. Although research often targets these several variables one at a time, the variables clearly overlap, both theoretically and in practice. To more accurately account for the degree to which these several related variables influence client outcome, important variables may benefit from being examined in the presence of one another.

The present research synthesis intends to evaluate the association of the therapeutic alliance with therapy outcomes while simultaneously examining the association of outcome with other important client and therapist factors. Specifically, this project will synthesize the extant research literature using meta-analytic methods. Although many univariate meta-analyses have

previously been conducted, these univariate analyses may not always provide the most accurate estimates, due to the theoretical and statistical overlap that may exist between variables. At present, the primary limitation to gathering accurate estimates of the variance of outcomes that can be attributed to the therapeutic alliance is the fact that few studies have consistently examined the effects of the alliance while in the presence of client or therapist variables. Due to the preponderance of univariate analyses in the literature, the number of studies utilizing multivariate methods (e.g., multiple regression, structural equation models) is limited; therefore, at this time, a meta-analysis of studies utilizing simultaneous methods is not possible due to the dearth of studies available.

There is, however, another method of estimating shared variance between predictor variables, such as the therapeutic alliance and associated variables, which is to utilize partial correlations and estimate the unique variance explained by a distinct process variable (Aloe, 2014). Therefore, this present study will utilize partial correlations to estimate the unique variance explained by pertinent client and therapist characteristics after accounting for the variance contributable to the therapeutic alliance.

Psychotherapy research offers insights and breakthroughs with regards to how best to serve our clients. It is imperative, for the sake of the well-being of clients, and the sake of our field, that our research offers the most up-to-date and accurate analyses of the process of psychotherapy. The present research study examines whether the therapeutic alliance accounts for a greater amount of outcome variance above and beyond client and therapist factors such as therapist empathy, client attachment style, and client expectations. The present study may

further our understanding of psychotherapy through analyzing the partial correlation of the therapeutic alliance alongside other client and therapist factors, offering the potential for a more accurate understanding of the data than presently available through univariate research.

CHAPTER 2: Literature Review

Psychotherapy Outcomes

The historical roots of psychotherapy are deep and intertwined with other areas of inquiry such as philosophy, theology, and other scholastic explorations of human nature. These lines of exploration have undoubtedly had a large influence on contemporary psychological thinking and modern psychological methods of research (Rychlak, 2000; Wendt & Slife, 2007). Since the time that psychotherapy was first formally conceptualized in the early work of Joseph Breuer and Sigmund Freud (Breuer & Freud, 1895/2000; Schimmel, 2014), a plethora of treatment modalities have arisen; two decades ago, there were already over 250 unique therapeutic modalities in practice (Goldfried & Wolfe, 1996).

Research on psychotherapy, extremely limited in the early decades of its practice, has increased substantively over the years. Psychotherapy outcome research has taken two distinct approaches to research, the first being that of overall efficacy and the second being that of relative efficacy (Benish, Imel, & Wampold, 2008; Goldfried & Wolfe, 1996; Lambert, 2013). Stated more succinctly, the field has sought to explore whether psychotherapy is effective at all and, if so, which forms of treatment are more efficacious.

Some early researchers questioned the effectiveness of psychotherapy (Eysenck, 1994; Feltham, 1996). Early case studies examining and detailing the work of psychotherapy showed that there was often a reduction in symptomology and an improvement in overall functioning, but these research methods typically lacked the sophistication and methodological rigor of modern research standards and thus contained much potential for empirical error (e.g., Coriat, 1910; Mayer, 1911). As clinical research began to advance, more systematic explorations of the efficacy of psychotherapy arose in the literature (Miller, 1951). Research designs examined

groups of individuals in therapy and their outcomes (Cross, 1964; Mintz, Luborsky, & Christoph, 1979). Other research designs compared those receiving treatment to those who were not receiving treatment, rather than simply comparing pre-to-post change (e.g., initial depression at intake and final depression at termination; Luborsky, Singer, & Luborsky, 1975). Narrative reviews of the relevant literature found that overall, successful completion of psychotherapy led to patients appearing to improve across a wide array of outcomes, such as reduction of symptoms or improvement in functioning (Garfield, Prager, & Bergin, 1971). With the introduction of meta-analytic methods, more sophisticated and detailed empirical data supported the overall efficacy of psychotherapy across samples (Lambert, 2013; Wampold, 2010c). These meta-analytic findings have consistently shown that psychotherapy is, in the aggregate, more effective than non-therapeutic interventions. Other reviews have furthermore shown that psychotherapy is as effective as medication and that the results of psychotherapy often persist once treatment has terminated (Lambert, 2011; Lambert, 2013).

As the empirical support for the efficacy of psychotherapy grew, a shift in research began to focus on the efficacy of various modalities in relation to each other. After all, with over 250 different types of therapies (Goldfried & Wolfe, 1996), it stands to reason that there may be several that are more effective than others. Indeed, the theoretical foundation of most psychotherapy models is that these are universal theories that can be applied across a wide array of clients (Slife, 1995; Slife & Reber, 2001). Most theories do not, therefore, purport to only work occasionally, and empirical inquiry has followed this line of reasoning with the examination of whether specific modalities are more efficacious relative to other modalities, including factoring in treatment for specific diagnoses. For instance, cognitive-behavioral interventions often display efficacious results in the treatment of depression, anxiety, and other

psychological disorders (Forman et al., 2012; Morrison et al., 2012; Singer, Addington, Dobson, & Wright, 2014). Trauma-specific interventions, such as exposure-based therapy (McLean & Foa, 2013), likewise are recommended over other modalities when working with clients with a history of trauma and often display more efficacious outcomes compared to other modalities (Foa, McLean, Capaldi, & Rosenfield, 2013). This approach to treating specific psychiatric disorders with empirically supported forms of psychotherapy has become such a foundational element of the clinical field that many professional organizations, divisions of the American Psychological Association, and insurance companies now encourage clinicians to utilize treatments that have demonstrable empirical support (APA Presidential Task Force on Evidence-Based Practice, 2006; Dozois et al., 2014; Drisko, 2014).

While therapeutic outcome studies have helped to establish that specific interventions treat specific disorders or conditions, the question of relative efficacy remains. Many psychotherapy outcome studies have shifted beyond examining the question of absolute efficacy (i.e., psychotherapy vs. no treatment or a non-therapeutic intervention) to now examining the relative efficacy of one modality vs. another. These studies provide a clearer understanding of which modalities work for specific disorders and often provide empirical evidence for one treatment being more effective than another (Foa et al., 2013; Forman et al., 2012). These studies, however, are inherently fraught with methodological limitations such as utilizing therapists who have an allegiance to the modality being researched, utilizing measurements of outcome that favor one modality over another, or reporting differences that over the aggregation of multiple studies prove to be very small (Miller, Wampold, & Varhely, 2008; Wampold, 2001; Wampold, 2010b; Wampold, 2013). As such, while variances do indeed occur at the primary-

study level, these differences do not appear to remain in any significant manner across multiple studies (Wampold, 2001; Wampold, Minami, Baskin, & Tierney, 2002).

Another way to examine relative efficacy is to explore whether specific factors or techniques account for psychotherapy change. Scholars have suggested that these variables, such as when focusing on cognitive distortions in a CBT approach, may account for a significant amount of the variance in psychotherapy outcomes (Lambert & Barley, 2002; Oei & Shuttlewood, 1996). These specific interventions may be the active ingredients found in psychotherapies that uniquely differentiate between different approaches to psychotherapy. As such, the question of relative efficacy can also be addressed by examining the effectiveness of specific interventions as opposed to modalities as a whole. A meta-analysis by Ahn and Wampold (2001) examined bona-fide treatments that compared outcomes between a treatment that was removed of a theoretically important component and the same treatment that retained the critical component. Their findings suggested that over 27 studies, there was a very small and negligible difference between treatments that retained the specific component. These findings suggest that it is not necessarily the modality-specific ingredients that are responsible for the efficacy of treatments. Rather, this study supports the work of previous scholars in the assertion that factors independent of the treatment modality itself appear to be more important to outcome (Ahn & Wampold, 2001; Wampold, 2010a). Psychotherapy modalities appear to be effective for reasons that are not uniquely related to the theoretical framework advanced by specific modalities.

The Therapeutic Alliance

Perhaps no construct in psychotherapy has been as extensively examined in recent decades as the therapeutic alliance, with numerous scholars citing evidence for its importance as

it pertains to the process of psychotherapy and associated outcomes (Horvath et al., 2011; Lambert & Barley, 2001). Presently, however, scholars and practitioners have multiple theoretical and operational definitions for the construct of the therapeutic alliance. With numerous structured measures and countless theoretical interpretations, the present understanding of the therapeutic alliance is complex and multifaceted (Flückiger, Del Re, Wampold, Symonds, & Horvath, 2012; Horvath, 1994; Horvath et al., 2011). Regardless, the construct of the therapeutic alliance is perhaps best understood as the joint effort on the part of client and therapist to meaningfully address the presenting concerns of the client (Hatcher & Barends, 2006). This healing relationship is dynamic and fluid in nature. The therapeutic alliance, out of necessity, takes into consideration the ability of the client and therapist to form a working relationship that is both driven by a purpose, as well as by agreement on tasks and an overall emotional bond. As a result, client, clinician and treatment variables are all expected to impact the strength, and subsequent efficacy, of the therapeutic alliance.

At present, empirical inquiry associated with the therapeutic alliance has emphasized univariate analyses; specifically, research has emphasized the association between the therapeutic alliance and dependent variables of interest, most often therapeutic outcome (Horvath et al., 2011; Norcross & Wampold, 2011b). While these studies occasionally account for moderating variables, these moderations have not, across the aggregate, been examined. Such moderating variables can be present in the strength of the alliance, client characteristics, therapist characteristics, and/or treatment interventions (Horvath, 2001). Therefore, at present, current estimates of the relationship that the therapeutic alliance has with psychotherapy outcomes may not reflect the realities of change seen in practice; current estimates may underestimate or overestimate the relationship the alliance has with outcomes (Mallinckrodt, Choi, & Daly, 2014).

The construct of therapeutic alliance has deep historical roots, extending back to Sigmund Freud and other early psychotherapists such as Carl Rogers; these early theorists emphasized specific aspects of the clinician-client relationship that would later inform the modern construct of the alliance (Rogers, 1952). Freud's conceptualization of the importance of the relationship between the analyst and client was one that placed emphasis on the analyst presenting a blank canvas whereupon the clients can project their unmet libidinal needs onto the relationship through the process of transference (Freud, 1912). Although Freud placed important emphasis on the value of a clinician who resisted pulls of counter-transference, as seen across numerous case studies, retrospective analysis shows that throughout the majority of his work with clients, Freud's process of developing a strong relationship was much more complex than simply remaining minimally involved in the therapeutic alliance (Freud, 1912; Schimmel, 2014). Rogers would reject the notion of libidinal and subconscious drives, preferring to place emphasis on the healing nature that the therapeutic relationship provides for clients. Rogers primarily focused on the facilitative elements of psychotherapy, which he believed allowed clients to refute societal messages which promoted *tension of incongruence*, or a feeling by the individual that they are not living a life that is consistent with their worldviews or who they are as an individual (Rogers, 1958; Rychlak, 1973). The eventual goal of psychotherapy, self-actualization, was therefore seen as occurring only when a clinician provided a safe, empathic, and accepting environment (Rogers, 1961/2012). The insights provided by these seminal thinkers present contrasting views of human nature and healing, yet they both place value on the importance on the interaction between the client and the clinician. Other clinicians and scholars, such as Sullivan, May, and Yalom, would also provide alternative views on the importance the

therapeutic relationship as it pertains to the process of psychotherapy (May, 1996; Sullivan, 2013; Yalom, 1980).

The therapeutic alliance as understood by many modern clinicians, however, would receive further inquiry by Bordin (1979), whose operational definitions continue to influence the literature to this day. Bordin suggested that the therapeutic alliance, also called the working alliance, was a general collaborative achievement by the client and the therapist. This collaboration focused on three major aspects of therapy: an agreement of the process of therapy, a bond between client and therapist, and an agreement on the goals of treatment (Bordin, 1979; Bordin, 1994). An agreement of the process of therapy relates to the collaborative understanding that the client and the therapist have about the role and process of therapy (e.g., session frequency, confidentiality, boundaries). The second component is the bond between client and therapist, corresponding to the affective bond that exists between client and therapist (e.g., feelings of trust, respect, empathy). This affective bond is typically what comes to mind when one thinks of the therapeutic alliance. Finally, the agreement of the goals of treatment pertains to whether the client and therapist agree about what the goal of therapy should be (e.g., symptom reduction, relationship improvement, vocational goals). The writings of Bordin have laid the foundational framework for future research concerning the therapeutic alliance and its various components. There has, however, been a tendency in the field to view the alliance as an indicator of the broader conceptualization of the relationship, or as a component of psychotherapy itself. The alliance is more accurately understood as a superordinate construct that exists on a level above therapeutic interventions (Hatcher & Barends, 2006). Interventions, technique, and relational variables impact the development of the alliance and can give insight into its strength.

As previously mentioned, the continuous finding of non-significant or minimal differences between treatment modalities has resulted in scholars examining the curative components that are present across all treatment modalities. While the therapeutic alliance has been operationalized by numerous structured measures, the empirical literature has consistently supported the importance of this construct across modalities. A recent meta-analytic review of the relationship between the therapeutic alliance with psychotherapy outcomes produced an effect size of $r = .275$ (Horvath et al., 2011). The therapeutic alliance has been shown to be associated with outcome across children and adolescent clients as well, with an effect size of $r = .22$ (Shirk, Karver, & Brown, 2011). The therapeutic alliance is undoubtedly an important therapeutic factor that is found across many treatment modalities and is associated with improved outcomes (Asay & Lambert, 2002; Duncan, Miller, Wampold, & Hubble, 2010; Lambert, 2013).

While the therapeutic alliance has received empirical support for its relationship with outcome, several scholars have suggested that it is likely impacted by client, therapist, and treatment variables (Del Re, Flückiger, Horvath, Symonds, & Wampold, 2012; Horvath, 2001). Such variables have been suggested as moderating the likelihood of clients continuing in treatment, engaging in the processes of psychotherapy, and having improved outcomes. As such, while the therapeutic alliance is undoubtedly an important variable, it is at present still not understood while in the presence of other client or therapist factors.

Factors to Consider in the Association Between Therapeutic Alliance and Client Outcome

As previously mentioned, scholars have acknowledged the inherent impact that the alliance and various relational elements specific to both client and clinician appear to have on psychotherapy outcomes (Lambert, 2011; Norcross & Lambert, 2011; Norcross & Wampold,

2011a). This section will review three relevant considerations: client attachment style, client expectations for improvement, and therapist empathy.

Attachment style. Clients bring their own relational patterns into the therapy room along with their beliefs about treatment; these client characteristics may impact the process of psychotherapy (Grencavage & Norcross, 1990). Attachment style has been suggested as being one such client characteristic that may impact treatment (Lambert & Barley, 2001).

Attachment style is a psychodynamic construct first introduced by John Bowlby and was used to explain the manner in which humans connect, or bond, to important figures in their lives; these bonds later serve as either secure bases from which individuals explored the world freely or as insecure bases in which the individual constantly experiences the world with anxiety or other negative affective experiences (Bowlby, 2005; Bowlby, 2008). Bowlby and other scholars have suggested that not only may attachment style moderate the process of psychotherapy, but that it also may be a causal component of psychopathology (Bowlby, 2005; Fonagy et al., 1996).

Research on client attachment style has revealed that attachment style impacts clients across a myriad of different areas. Scholars have provided empirical support that attachment style impacts cortisol levels, subjective levels of grief, and posttraumatic growth, as well as overall life satisfaction (Babaie & Baseri, 2014; Cohen & Katz, 2015; Smyth et al., 2015). The empirical literature appears to support the evidence that attachment style impacts the manner in which individuals are able to respond to stress and life obstacles, with individuals who have a less secure attachment style being less able to cope and manage with stressors (Mayville, 2015). Across numerous studies, scholars have provided support for the relationship between insecure and dismissing attachment styles and elevated levels of psychopathology (Camp, 2015; Geller & Farber, 2015; Strand, Goulding, & Tidefors, 2015). Furthermore, individuals with anxious or

dismissing/avoidant attachment styles also appear to have difficulties appropriately modulating their emotional expression relative to individuals with secure attachment styles (Mayville, 2015). Other research suggests that attachment style may also impact the utilization of mental health services, as well as the response to positive stimuli both inside and outside of the therapy room (Geller & Farber, 2015; Meng, D'Arcy, & Adams, 2015; Silva et al., 2015). The effect of attachment style across multiple life areas, such as the ability to modulate stress and attend to positive stimuli, undoubtedly influence the process of psychotherapy and its related outcomes.

Empirical research has provided support for both the moderating role of attachment style and the role of attachment style as an outcome variable (Horowitz, Rosenberg, & Bartholomew, 1993; Levy et al., 2006). A meta-analytic review across 14 manuscripts examining the association of attachment style with client outcomes, reported an effect size of $d = -.46$ between attachment anxiety and outcome, and there was a reported effect size of $d = .37$ between attachment security and outcome (Levy, Ellison, Scott, & Bernecker, 2011). These findings suggest that clients with less secure attachment styles may be less able to engage in the process of psychotherapy, with these clients having lower outcomes and slightly higher dropout rates, unlike those with more secure attachments who may be more likely to benefit from various common factors found in psychotherapy. Overall, it appears that client attachment style is likely to influence the process of psychotherapy, particularly the development of the therapeutic alliance. Individuals with less secure attachments may not respond to positive therapeutic stimuli (e.g., empathy, feedback, encouragement), may have difficulties modulating their emotional expression, and may engage in therapy with higher levels of distress (Camp, 2015; Geller & Farber, 2015; Mayville, 2015; Strand et al., 2015).

Client expectations for improvement. Jerome Frank theorized that the instillation of hope in the client in the context of an emotionally charged healing relationship was one of several critical therapeutic factors promoting eventual healing (Frank & Frank, 2004). Clients may often enter psychotherapy with expectations related to the process of therapy (e.g., session lengths, scheduling) and also expectations related to whether therapy will work (i.e., if their levels of distress will dissipate or be reduced). Clients may struggle to engage in the process of psychotherapy if they are not provided information with regard to what they should expect during the course of psychotherapy, as well as their role of involvement (Ekberg, Barnes, Kessler, Malpass, & Shaw, 2014). This impact on the process of psychotherapy can be seen as clients with low outcome expectations have been shown to be less likely to engage in self-disclosure and interpersonal trust with their therapists during moments of therapeutic resistance or conflict (Ahmed, Westra, & Constantino, 2012). Clients with higher, or more positive, expectations related to outcome and therapy in general are more likely to develop a strong early therapeutic alliance, attend the initial treatment session, and have positive perceptions of the process of therapy (Magyar-Moe, 2004; McClintock, Anderson, & Petrarca, 2015; Patterson, Anderson, Wei, 2014; Swift, Whipple, & Sandberg, 2012; Yuar & Chen, 2011). There is a substantial literature suggesting that the expectations that clients have related to therapy and outcome may impact the process of psychotherapy, such as whether the client will engage in treatment or whether they will continue to attend therapy.

Further clinical findings support the idea that client expectations impact not only the process of psychotherapy, but also the associated outcomes; clients who have more positive expectations appear to be more likely to have improved by termination (Constantino, Manber, Ong, Kuo, Huang, & Arnow, 2007; Greenberg, Constantino, & Bruce, 2006; Patterson et al.,

2014). Across 46 independent samples, a meta-analytic review (Constantino, Arnkoff, Glass, Ametrano, & Smith, 2011) reported an effect size of $d = .24$, indicating a small effect size. Client expectations do appear to impact psychotherapy outcomes. As clients enter therapy, regardless of what modality they engage with, the literature is suggestive of the importance that the client expectations have upon the process, and subsequent efficacy, of psychotherapy.

Therapist empathy. Although clearly related to the therapeutic alliance, empathic responses by the therapist have been suggested as being distinct from the construct of the alliance (Malin & Pos, 2015). Carl Rogers first described empathy as an essential element of psychotherapy that allows the clinician to enter into the world of the client and accurately identify, and understand, the emotional experiences of the client (Farber, 2007; Rogers, 1952). This empathic understanding of the client, Rogers would argue, was a necessary and sufficient element that was required for the client to improve through therapy. This construct was seen as being so critical to the process of psychotherapy that it was identified as being theoretically distinct from other variables.

Scholars have broken down empathy into three distinct categories that would further expound upon Roger's initial definition of empathy. These three categories are empathic rapport, communicative attunement, and person empathy (Elliott, Bohart, Watson, & Greenberg, 2011). Empathic rapport consists of the therapist attempting to exhibit a compassionate attitude that aligns with the inner experiences of the client. Communicative attunement refers to the active verbal process of attempting to understand the experiences of the client. The third category, person empathy, refers to a more contextual understanding of the client's experiences, such as his or her historical upbringing and present context as it relates to his or her worldview.

Research regarding empathy examines the construct along several different operational definitions.

Scholars have shown that therapists' empathy not only impacts the outcome of therapy, but also mediates the therapeutic alliance (Elliott et al., 2011; Myers, 2000). A meta-analysis of 59 samples found that empathy was correlated with psychotherapy outcomes with a reported $r = .31$ (Elliott et al., 2011). Research on this topic has, however, recently waned in the decades after the initial burst of interest (Watson, 2002). Scholars have begun to note the difficulty in operationalizing the construct and how it may overlap with other constructs such as warmth and positive regard (Elliott et al., 2011). While the research concerning empathy may have declined in recent years, it is important to note that the univariate correlation of empathy is a moderate one that is similar in scope to effect sizes found when evaluating the association of client outcome with therapeutic alliance. In addition, several treatment modalities identify empathy as being a critical and central component to the change process. The extent to which therapist empathy predicts client outcome while accounting for the strength of the therapeutic alliance remains to be confirmed.

Conceptual and experiential overlap among the alliance and other factors.

Psychotherapy is undoubtedly a complex process that requires multiple lines of empirical inquiry; however, that complexity creates several difficulties for researchers seeking to better understand therapeutic processes and outcomes. At present, there are at least three major limitations found in the empirical literature about the therapeutic alliance and its influence on client outcomes. The first limitation is operational and conceptual overlaps between purportedly different constructs, such as the overlap between the therapeutic alliance and empathy. Second, the associated research literature consists of many correlational studies using univariate analyses,

which may overlook shared variance with other important factors, such as client and therapist characteristics. Univariate analyses, while certainly providing some information, have several limitations that restrict our understanding of the interactions among multiple factors. Finally, at the meta-analytic level, empirical literature has not at present sought to synthesize and provide more accurate estimates of the relationship that the therapeutic alliance has with client outcomes after accounting for other important variables.

A model of the relationship between the alliance, therapist empathy, client attachment style, and client expectations will allow for a theoretical assumption of how these variables might interact. A proposed theoretical model for the interaction of client attachment style, therapist empathy, and client expectations assumes that the association of these variables with improved client outcomes are mediated by the strength of the therapeutic alliance (see Figure 1).

The theoretical model presented here proposes that effective therapists attend to important client variables (e.g., attachment style, expectations) and also modulate specific techniques (empathy) as they develop a working alliance over the course of treatment. It is hypothesized that the subsequent formation of the alliance is the variable most likely to be associated with improved client outcomes.

This model assumes that proximal client factors are most influential to the early process of psychotherapy, as well as to the eventual formation of a working alliance. Proximal variables (e.g., attachment style, cultural background, trauma history) are those client factors which are relatively stable and quite fundamental in the personality structure of the client. Distal variables, such as client expectations or readiness for change, are those variables which are more likely to be fluid and influenced directly by the proximal factors of the client. These client factors are attended to by the therapist and must be navigated to form a strong alliance. Client attachment

style in this model is theoretically proposed to influence how the client perceives whether therapy will be beneficial, both before and early in treatment (e.g., positive or negative expectations). Clients with more secure attachment styles are theorized to be more likely to have a positive expectation of therapy, whereas those with less secure attachment styles will likely be less hopeful. Additionally, attachment style is theorized as influencing the empathic responses of the therapist with more secure and dismissive attachment styles eliciting less empathic responses, while those that are more fearful or anxious elicit higher levels of empathy from the clinician. Successfully utilizing, or improving, client expectations and therapist empathy are hypothesized to result in a strong working relationship.

Attachment style is hypothesized to impact the expectations of clients as they present for psychotherapy. Clients with anxious attachment styles are more likely to experience emotional distress that predicts treatment seeking behavior, while those with an avoidant attachment style may be less likely to engage in personal disclosure within therapy (Kealy, Tsai, & Orgodniczuk, 2016). Insecurely attached individuals may harbor less positive views towards interpersonal relationships (e.g., Stackert & Bursik, 2003) and also maintain a higher degree of interpersonal distance (Kaitz, Barh-Haim, Lehrer, & Grossman, 2010). Given the inherent interpersonal nature of psychotherapy, it is expected that a client's attachment style would not only impact the process of therapy but also the client's beliefs, or expectations, of whether therapy will be effective.

This line of inquiry has not widely been examined, yet one study found that individuals with an anxious attachment style are more likely to have positive expectations for improvement, whereas those with avoidant attachment styles were more likely to have negative expectations about treatment outcome (Elchert & Gaasedelen, 2016). Thus, more research is needed before a

definite association between client attachment styles and client expectations can be asserted. Client expectations have, however, been shown to be positively associated with the therapeutic alliance (Anderson, Patterson, McClintock, & Song, 2013). In addition, one previous study utilized a mediation model, which suggested that positive client expectations enhance the therapeutic alliance, which in turn is positively associated with improved outcomes (McClintock, et al., 2015). Additional research may be beneficial to understanding how attachment style may impact client expectations, which may subsequently enhance or detract from the formation of the alliance.

Therapists' empathy is hypothesized as being utilized differently across clients with differing styles of attachment. As a specific example of how therapists may respond to clients differently depending on their style of attachment, one study demonstrated that therapists' empathic responses varied when asked to respond to actors role-playing different client attachment styles (Rubino, Barker, Roth, & Fearon, 2000). The client attachment styles that were secure and dismissing elicited less empathic responses than those given to the actors role-playing fearful and preoccupied attachment styles. Another study found that therapists responded with more affective responses to patients with a preoccupied attachment style, whereas their responses were more cognitive with those who had a more dismissive style of attachment (Hardy et al., 1999). Meta-analytic studies have provided further evidence that clients with secure attachments are more likely to form stronger therapeutic alliances than those with less secure styles of attachment (Bernecker, Levy, & Ellison, 2014; Diener & Monroe, 2011).

The theoretical model presented in this study (Figure 1) proposes that the association between attachment style and alliance is mediated by therapist empathy. One study suggests that

therapists who effectively and consistently provide a highly empathic style of therapy are more likely to form strong alliances with clients (Moyers & Miller, 2013). A theoretical explanation may be that this relationship between attachment style and therapeutic alliance may be mediated by therapeutic interventions (e.g., empathy) as well as more distal client factors, such as client expectations. Therapist interventions beyond empathy are also likely to be impacted by the attachment style of the client and may be influenced by factors such as countertransference; therefore, therapist interventions may likely be impacted by proximal client factors such as attachment style, cultural background, and other important variables.

Finally, it is also theorized that empathy and expectations likely influence one another and augment the respective effects of each variable. One study found that patients with high treatment expectations who received a consultation emphasizing empathic and warm communication experienced significantly lowered anxiety (Verheul, Sanders, & Bensing, 2010). A similar perspective is seen in the notion that the relational interactions between a provider and patient can positively enhance the strength of client expectations, or placebo effects, which in turn promote more positive outcomes (Wampold & Imel, 2015). This relationship was demonstrated in a placebo acupuncture treatment for irritable bowel syndrome (IBS) in which a placebo treatment (expectations) combined with a warm and empathic patient-practitioner relationship augmented the positive effects of one another (Kaptchuk et al., 2013). While expectations and empathy have separately been examined in psychotherapy research they have not, however, been examined in the presence of one another. Yet, given the interactive effects seen in other expectancy and placebo studies, it is hypothesized that empathy and client expectations likely interact and augment the effects of each variable when both are positive.

Curative factors appear simultaneously and exist within a context of one another, such that the therapeutic alliance is unlikely to exist independent of therapist and client factors. Although the therapeutic alliance, for instance, has been the most widely examined therapeutic factor, research has not always accounted for the presence of other important therapeutic, therapist, and client variables (Horvath, 2001). The therapeutic alliance undoubtedly has some conceptual and operational overlaps with the construct of empathy; specifically, it may be that empathy and a strong alliance (combined) account for more variance in client outcomes than either of these variables alone (augmentation effects); or it could be that the contribution of empathy becomes minimal when considered in the presence of the overall therapeutic alliance. Scholars have suggested that the relationship between empathy and outcome may be mediated by the alliance (Malin & Pos, 2015).

Constructs such as client attachment style and client expectations have been shown to impact the process of psychotherapy and eventual client outcomes (Ekberg et al., 2014; Geller & Farber, 2015; Magyar-Moe, 2004). Two separate meta-analyses have indicated a relationship between the alliance and attachment styles (Bernecker et al., 2014; Diener & Monroe, 2011). These constructs, therefore, are expected to coexist in naturalistic psychotherapy settings and are likely to be closely related. The empirical literature has thus far not reflected the complexity of the process of psychotherapy. It is therefore crucial that scholars shift focus and begin to examine therapeutic factors in a manner that estimates the impact of other present variables.

At present, empirical inquiry has primarily been correlational in nature, and as such has provided some evidence for the relationship that various client, therapist, and treatment variables have with improved client outcomes (Norcross & Lambert, 2011; Norcross & Wampold, 2011a). Although these studies have provided immeasurable value to the empirical literature, these

estimates may not reflect the unique variances that can be attributed to each variable, as they do not account for the presence of other client, therapist, or treatment variables. Without multivariate analyses, the current estimates may therefore either provide under- or overestimates of the relationship that these variables may have with outcome. Finally, with so many therapist and client characteristics, the current literature has not sought to synthesize these variables simultaneously to provide a more accurate estimate of the relationship with improved outcomes that can be attributed to each unique factor.

The overlap between constructs may never be resolved theoretically, but empirical literature can seek to inform which variables may be more important to the process of psychotherapy; furthermore, while multivariate analyses are not always common in the empirical literature, other estimates, such as calculating partial correlations, can seek to estimate the unique variance attributable to important psychotherapy variables. Analyses of partial correlation coefficients may allow for a broader understanding of the context in which psychotherapy is effective, as well as a more accurate estimate of the relative importance of other client and therapist factors.

All empirical questions in psychology are inherently multivariate in nature, as it is very rare that only one variable accounts for a majority of variance in any model. At this present time, it is unlikely that enough multivariate analyses exist in the literature to allow for a meta-analytic estimate. This lack of multivariate analyses is due primarily to two reasons. The first is that research has emphasized the therapeutic alliance and there has not been a general consensus on which other therapeutic variables are of importance; therefore, there is a preponderance of literature on the therapeutic alliance but, comparatively, a dearth of consistent research examining other therapeutic constructs while in the presence of the therapeutic alliance. The

second limitation is that if research has examined other therapeutic constructs alongside the alliance, the question of how much the alliance and other associated factors overlap has not received much attention. Many studies may therefore contain correlational data, but not multivariate data, which statistically controls for the presence of these other constructs when in the presence of the alliance. Therefore, at present, a partial correlation meta-analysis provides the next best estimate of the unique variance of outcome that can be attributed to the alliance while accounting for other variables. Such an approach would aggregate the correlational studies in the literature, which are likely to be more readily available than multivariate designs, and would account for the overlap in variance that may be found between the therapeutic alliance and important client and therapist factors.

The purpose of this meta-analytic review is to examine the unique variance of outcome attributable to the therapeutic alliance while accounting for other important client and therapist factors. Such an analysis will compare the factors of empathy, client expectations, and attachment style to the therapeutic alliance as they relate to outcome. The amount of unique variance attributable to each factor will be estimated by calculating partial correlations in which the statistical relationship between variables (e.g., therapeutic alliance and client attachment style) is accounted for. Analyses of partial correlations would allow scholars to test the hypothesis that the association of therapist empathy, client attachment styles, and client expectations with improved outcomes is mediated by the therapeutic alliance. Given the theorized relationship between these variables, it is hypothesized that the alliance will remain as the sole predictor of client outcome in the presence of the other variables. Such an analysis will allow for a more accurate estimate as to what degree each therapeutic factor predicts outcome

after accounting for the therapeutic alliance. Specifically, the research questions addressed in this meta-analytic study are as follows:

1. To what degree do client ratings of the therapeutic alliance and level of expectation for treatment improvement predict client outcome, in the presence of one another?
2. To what degree do client ratings of the therapeutic alliance and client ratings of therapist empathy predict client outcome, in the presence of one another?
3. To what degree do client ratings of the therapeutic alliance and client ratings of attachment style predict outcome, in the presence of one another?

In addition to the three primary research questions listed above, this study will address two supplemental research questions:

4. To what degree do the partial correlation coefficients obtained in response to the first three research questions above differ from the zero-order correlations reported in manuscripts (the unadjusted associations of the four independent variables with client outcomes)? In other words, how different are the coefficients following statistical adjustment.
5. To what degree do the partial correlation coefficients obtained in response to the first research questions above differ from the zero-order coefficients reported in previously published meta-analyses? For instance, after accounting for the presence of client expectations for improvement, how does the resulting partial correlation of therapeutic alliance with client outcome compare with the corresponding zero-order coefficient reported in the meta-analysis by Horvath et al., 2011?

CHAPTER 3: Method

Literature Search

An initial literature review was conducted to narrow down a list of client and therapist variables that may impact the therapeutic relationship. This initial search for variables pertinent to the process of psychotherapy, as well as client and therapist characteristics, was conducted on 16 variables previously identified by scholars as being influential to client outcomes (Grencavage & Norcross, 1990; Norcross & Lambert, 2011; Tracey, Lichtenberg, Goodyear, Claiborn, & Wampold, 2003). This initial search located a large number of articles, with the therapeutic alliance being the variable most consistently represented in the literature (Table 1). Overlaps between the 16 variables were then examined to identify which articles contained multiple predictor variables. Studies were also reviewed individually to confirm that client outcome data were measured. Based on this initial review, three variables were found to overlap with the therapeutic alliance: therapist empathy, client expectations for improvement, and client attachment style. Targeted literature searches for these variables were subsequently conducted to identify additional studies that could be included in the present meta-analysis.

As noted previously, scholars have already conducted many meta-analytic reviews of various promising process/relational variables as they relate to psychotherapy outcome (Norcross & Lambert, 2011). Thus, as a first step of this dissertation, a search for meta-analyses specific to the therapeutic alliance or the three other variables was conducted. This step was essential because the empirical literature is vast, and we needed to first gain a broad overview of the research previously conducted on pertinent client and therapist factors. The search terms used to locate the meta-analyses included lengthy lists of synonyms of process/relational factors (Grencavage & Norcross, 1990; Norcross & Lambert, 2011; Tracey et al., 2003). These terms

and their synonyms were entered into the PsycINFO thesaurus, such that additional search terms were identified for each of the variables. These long lists of search terms were then combined with a set of terms that were unique to meta-analytic reviews or empirical reviews (e.g., “meta-analy* OR “systematic literature review” OR “synthesis of literature”). Identifying prior meta-analyses not only provided an overview of the empirical research available but also provided lists of individual studies available for possible inclusion in this meta-analysis. Thus, as a second step in our literature search, we retrieved the individual studies evaluated in the meta-analytic reviews.

In a third step, we conducted extensive searches of electronic databases to identify original research on each of the four identified variables to locate manuscripts either missed by the authors of the meta-analyses or published after the meta-analyses. These searches were conducted using PsycINFO for each therapeutic variable of interest. As above, the term itself (e.g., “empathy”), its synonyms, and the relevant PsycINFO thesaurus terms were used in the search. These lists of terms to designate the variable of interest were crossed with a lengthy set of terms designed to identify articles related to psychotherapy outcome (e.g., “treatment outcome” OR “therapeutic outcome” OR “symptom reduc*”). This extensive method of searching was designed to identify all relevant manuscripts, and the searches required several months to complete using a sizeable team of research assistants.

As an additional step, all individual search strings were combined with terms relevant to the therapeutic alliance in an effort to thoroughly search for all articles containing multiple factors. The terms relevant to the therapeutic alliance include not only synonyms relevant to the construct of the alliance, but also terms specific to commonly used measures of therapeutic alliance (e.g., The Working Alliance Inventory, Helping Alliance Questionnaire).

In a final step, we examined all articles obtained (those retrieved from prior meta-analyses and those located through searches for original research) to identify manuscripts inclusive of multiple client and therapist factors. We specifically sought for manuscripts that evaluated multiple relational, client, or therapist factors in the presence of the therapeutic alliance, but we accepted any manuscript in which at least one type of client or therapist factor had been evaluated alongside the therapeutic alliance. The resulting numbers of manuscripts with overlapping data are presented in Table 2.

Inclusion/Exclusion Criteria

Studies included in this meta-analysis contained data on the association of the therapeutic alliance with client outcome and similar data on at least one of the following variables: client expectations for improvement, client attachment, or therapist empathy. The studies included in this meta-analysis reported data on one of those three variables in addition to the therapeutic alliance and were collected prior to the time of outcome being measured. The studies included were furthermore required to have utilized a bona-fide treatment of a psychological disorder identified in a diagnostic manual (i.e., a current or previous version of DSM or ICD). Effect sizes were only extracted on outcome measures that evaluated changes in either overall psychological functioning or on the specific conditions that were the focus of the treatment provided (i.e., primary outcomes, not secondary outcomes). Effect size extraction also required the association between predictor variables (i.e., therapeutic alliance and attachment style) to have either been analyzed simultaneously in a multivariate model or reported in a correlation matrix. Studies not containing data in these formats were excluded.

This meta-analysis was restricted to research assessing client outcomes in individual psychotherapy. Group therapy, couples therapy, marital counseling, etc. were excluded. This

decision was based on the rationale that: (a) the therapeutic alliance is more commonly measured in research of individual therapy and (b) the therapeutic alliance becomes more complicated when other individuals are present in treatment (Yalom, 1995). Thus the decision to only include individual treatments was made for the sake of consistency when combining results across studies.

This meta-analysis focused on treatments of psychological conditions, but excluded treatments specific to substance abuse that only reported outcomes in terms of substance abuse behaviors (e.g., number of drinks, length of sobriety). This decision was made because substance abuse treatments can differ from traditional psychotherapy methods and because substance abuse treatments can involve involuntary treatment, which would likely adversely impact the dynamic of the therapeutic alliance, client perceptions of therapist empathy, and client expectations for change.

Literature searches were conducted in both English and Spanish because the primary authors and several other research team members were fluent in both languages. Articles in other languages were not considered. Articles were not excluded based on year of publication, although that variable was coded to evaluate the possibility of findings systematic changes over time.

Data Coding

Teams of two trained coders extracted the data from all articles that met inclusion criteria. These research members consisted of undergraduate research assistants and a graduate-level researcher. Two independent teams of coders coded each article (such that each article was coded twice). Members of each team conducted a final verification process in order to resolve discrepancies between coding teams.

Information extracted by the coding teams included independent and identifiable characteristics of each individual study. These characteristics included the source of publication (e.g., dissertation, journal article), sample size, and characteristics of the sample (e.g., age, gender, education). Additionally, coding teams extracted information relevant to whether the sample size represented an inpatient population or an outpatient population, the treatment type and duration of treatment, and information specific to the measurements of process/relational variables and outcome. A copy of this coding sheet appears as an Appendix.

Inter-Rater Reliability

A majority of the information presented in manuscripts was extracted and coded verbatim from the available data. Inter-rater agreement between coding teams was calculated for categorical variables using Cohen's *kappa*, with the average value across variables being an acceptable .70. Inter-rater agreement for continuous variables was calculated using intraclass correlation one-way random effects models for single measures, with the average value across variables being a respectable .85. Discrepancies across coding teams were resolved through further scrutiny of the available manuscripts. This final verification process entailed all research members meeting together and resolving the discrepancies with input from the primary faculty advisor.

Computation of Effect Size Estimates

Manuscripts most commonly reported the association between variables using the metric of a correlation coefficient, although some articles included partial correlations, *p*-values, multiple regression coefficients, in addition to other metrics. To enable data aggregation and comparisons across studies, all data were transformed to a common metric using meta-analytic software. Given the research questions addressed in this meta-analysis, the data aggregated in

this meta-analysis consisted of partial correlation coefficients. When manuscripts only reported zero-order correlations, partial correlations were estimated after identifying the correlations among the independent variables (alliance, empathy, attachment style, or client expectation) and their association with the dependent variable (client outcomes). When manuscripts reported results in terms of multiple regressions or path analyses, the associated standardized beta weights or path coefficients were extracted so long as the models accounted for the presence of the therapeutic alliance and either client expectations for improvement, client perceptions of therapist empathy, or client level of attachment. Effect sizes reported as being “non-significant” were coded as an $r = 0$ if the manuscript provided no further information regarding the magnitude or direction of the non-significant finding. For the correlational data, partial correlations were estimated by entering the correlation of each variable with outcome (e.g., alliance and outcome and empathy with outcome) into a partial correlation calculator. The correlation between the two predictor variables (e.g., empathy and outcome) was extracted from a correlation matrix reported in each study and then entered in the partial correlation calculator. This method provided a partial correlation that was then entered as the adjusted effect size. Weighted aggregate correlations between each predictor variable and the alliance were averaged by weighting each study by the number of participants.

Psychotherapy outcome research commonly reports multiple measures for the independent and/or dependent variable. For instance, client outcome can be evaluated using several measurements, such as both symptom-specific measures (e.g., anxiety, depression) and measures of global psychological functioning (e.g., SCL-90, OQ-45). Studies with multiple measures of psychological outcome were aggregated so that each study thus yielded one overall effect size (combined data from measures of depression, anxiety, multiple symptom inventories,

etc.) for each of the four independent variables (therapeutic alliance, client expectations, client attachment, and therapist empathy).

Scholars have suggested that measures rated by clinicians often overestimate various process aspects of psychotherapy, as well as psychotherapy outcomes (Lambert, 2013). Given these findings in the previous literature, we chose to focus on client-rated data. When both clinician- and client-rated data were available, we only coded the client-rated data. When only therapist-rated measures were given, we chose to include the data but to conduct subsequent comparisons and also coded the source of the measurement as being therapist-rated.

Data Analyses

We analyzed the data in two steps. In the first step, univariate meta-analyses of both zero-order and partial correlation coefficients for each variable with client outcome were averaged across studies. As a second step, multivariate analyses were conducted wherein each predictor variable was simultaneously examined in the presence of the alliance. Specifically, three multivariate meta-analyses were conducted, with two variables in each model: (a) therapist empathy and therapeutic alliance, (b) client attachment and therapeutic alliance, and (c) client expectations and therapeutic alliance. These univariate and multivariate meta-analyses provided information needed to answer the first three research questions of this study. Although it would have been optimal to have conducted a single multivariate analysis with all variables, no overlapping data existed for variables other than the therapeutic alliance.

As indicated previously, the effect size data in the models consisted of partial correlation coefficients that accounted for the shared variance between the predictor variables (Aloe, 2014). Each individual study contained either correlational data or regression models that included the process variables associated with outcome. Due to the fact that as the population value of a

correlation coefficient moves further away from zero, the distribution of values sampled from that population becomes more skewed, during analyses all coefficients were temporarily transformed to Fischer's z coefficients (Rosenthal, 1979). This conversion to Fischer's z allows for coefficients to be appropriately aggregated prior to transformation back for purposes of interpretation.

Due to the variability between studies (e.g., methods, client characteristics, outpatient vs. inpatient), random effects models were utilized in these analyses. Random effects models differ from fixed effects models in that the random effects model assumes that there are likely to be extraneous variables not accounted for in the studies whereas the fixed models assume that the studies obtained contain the effects that are likely to be observed. Given the complexity of psychotherapy, as well as psychotherapy research, it is expected that there are likely extraneous variables that have not been accounted for in the extant studies, thus random effects models seemed most appropriate for the analyses (Borenstein, Hedges, Higgins, & Rothstein, 2010).

To answer the two supplemental research questions, univariate analyses, previously mentioned above, were performed. The omnibus partial correlation coefficients generated in the first analytical step described above were compared with the averaged zero-order correlation coefficients reported in the manuscripts (research question 4) and also compared with the values reported in previously published meta-analyses (research question 5). Thus the effect sizes found across the three different pairs of analyses for the therapeutic alliance (accounting for the presence of the other variables of interest) were compared with the results reported in the manuscripts prior to statistical adjustment (research question 4) and results reported in recent meta-analytic reviews (e.g., Horvath et al., 2011). These analyses provided estimates of how

much statistical adjustment (accounting for the presence of conceptually overlapping variables) could be expected to change the results of a typical study reporting only zero-order correlations.

Evaluation of Possible Publication Bias

As with any meta-analytic review, it is possible for the results of this study to be inflated due to the presence of the so-called *file-drawer effect* (Rosenthal, 1979). Such an effect results from the tendency for manuscripts with null findings or negative findings to remain unpublished (in the file drawer). Because it is easier to locate published studies than unpublished ones, the results of a meta-analysis can be biased if the effect sizes are indeed larger in published studies than in unpublished studies. As such, to rule out the possibility of publication bias, three analyses were conducted.

First, a fail-safe N was calculated (Begg, 1994). This provided a statistical estimate of the number of unpublished or missing studies that would be required to reduce the overall effect size presented in the meta-analysis to a small or minimal effect size.

Next, a visual representation of the data was presented in the form of a scatter-plot to further assess the possibility of publication bias (Figure 1). A visual representation of effect sizes (represented by the x-axis) by the number of participants per study (represented by the logarithmic y-axis) was created. The resulting visual representation was expected to resemble an inverse funnel. Data that does not produce a funnel, or that contains “missing” corners, may indicate the presence of possible publication bias.

A third step to evaluate the possibility of publication bias was to utilize the *trim and fill* method (Duval & Tweedie, 2000a; 2000b). This method involved removing outlying studies that did not have corresponding values on the opposite side of the data distribution and then recalculating the mean effect size. This process was repeated until the distribution is symmetrical

with respect to the mean. An L_0^+ estimate was used to determine the number of missing studies that may not be accounted for in the data.

Finally, we replaced the trimmed studies along with filled estimated values of missing studies on the other side of the distribution. The filled studies corresponded with the opposite values of those that have been trimmed. In the present study, there was no indication of “missing” studies, therefore a new effect size was not calculated due to the trim and fill analysis not providing any data points.

Examination of Moderation

There was a possibility that the association between the four independent variables and client outcomes could differ systematically across studies using different methods and/or involving different participants (e.g., the therapeutic alliance may influence client outcomes to a greater degree when the clients have more severe levels of distress than when they have mild levels of distress). This possibility of moderation was further examined if the effect sizes observed across studies are heterogeneous for the adjusted values. Variables such as client and clinician demographics, research design, and measurement characteristics were coded to ascertain to what degree they may have moderated outcomes.

Continuous data such as client age, percentage female, and intake symptom level were coded and analyzed using a random effects weighted simple regression models. Categorical data, such as treatment type, inpatient/outpatient status, source of measurement data, etc., were analyzed using random effects weighted analysis of variance. An a priori decision was made to include any variables that contributed at least two percent of the variance in client outcomes into a simultaneous meta-regression model. This decision was made, contrary to customary practice, due to the assumption that relatively few studies would be identified. None of the coded

variables met this a priori criterion, however, such that no meta-regression models were conducted.

CHAPTER 4: Results

Descriptive Characteristics

Statistically non-redundant effect sizes were extracted from 23 studies examining the relationship between client outcome and therapeutic alliance, client attachment style, client expectations, and therapist empathy. Table 3 contains descriptive information for the 23 studies. The number of participants represented across all studies was 1,653. Participants were 63.9 percent female and the average age of participants was 33.6 years. Average ethnic/racial composition of participants across all studies was 67% White/European American, 7.8% African Americans, 3.9% Hispanic/Latino(a) Americans, 2.2% Asian Americans, 0.6% Native Americans, and 3.8% “other” non-White groups, with 14.6% of all participants being from Canada and the United Kingdom.

The therapeutic alliance was measured across all studies using commonly used measures (e.g., Working Alliance Inventory, Helping Alliance Questionnaire). On average, those measures were administered at the third session of treatment, although administrations ranged from the first to the seventh session ($SD = 1.5$). Client treatment outcome was measured on average after 12.7 sessions, with a range from the third to nineteenth session ($SD = 5.0$). The measures of empathy, treatment expectation, and client attachment style were most often administered at the first session, with administrations ranging from before the first session to the fourth session ($SD = 1.3$). Across studies, an average of 22% of participants discontinued treatment prior to completing a final evaluation of symptom outcome.

Analyses of the Association Between Therapeutic Alliance and Client Outcomes

As the next step in the analyses, we calculated the random effects weighted correlations of each measure with client outcome. Unadjusted values were calculated prior to estimating

values adjusted for the presence of the other variables. Analyses of the therapeutic alliance with client outcomes are reported first. As may be seen in Table 4, the average unadjusted correlation of the therapeutic alliance with client outcome was $r = .29$ ($p = .011$), with a 95% confidence interval of $r = .244$ to $r = .341$. Across all 23 studies, the average correlation of the therapeutic alliance with client outcome, after being adjusted for the other predictor variables, was $r = .258$ ($SE = .01$, $p < .001$), with a 95% confidence interval of $r = .18$ to $r = .33$. Estimates ranged from $r = -.163$ to $r = .548$, with moderate heterogeneity ($I^2 = 57\%$; $Q_{(22)} = 50.9$, $p < .001$). This suggests that the systematic effect size for the adjusted therapeutic alliance variability was moderately greater than expected from sampling error alone. Additional analyses were therefore conducted in order to determine the degree to which client or study characteristics moderated the variability in effect size estimates. These subsequent analyses included both continuous (e.g., time of administration of alliance) and categorical (e.g., race/ethnicity of client) variables. These analyses of client and study characteristics yielded no statistically significant results; thus, the results reported previously were not moderated by client or study characteristics.

Assessment of Possible Publication Bias

It was important to ascertain whether the findings were impacted by publication bias. Because meta-analyses typically include predominantly published studies, which are easier to obtain and tend to have effect sizes of larger magnitude than unpublished studies, we used several methods to evaluate possible publication bias. As an initial step, average effect sizes were compared across publication status. The difference between published studies and unpublished manuscripts did not reach statistical significance, $Q = 20.5$ ($p > .05$). A subsequent examination of the funnel plot (Figure 1, depicting effect sizes by standard errors) indicated that the data were evenly dispersed with no missing corners, suggesting that studies with small

numbers of participants were adequately represented and were not necessarily missing from the analyses due to publication bias (Begg, 1994; Lipsey & Wilson, 2001). Analyses using Duvall and Tweedie's (2000a; 2000b) "trim and fill" method also indicated that publication bias did not adversely impact the results of this meta-analysis. Egger's regression test was also conducted to further examine the possibility of publication bias, but this analysis did not approach statistical significance, $p > .10$. Finally, the fail-safe N was estimated to be 576, indicating that there would have to be 576 "missing" studies in order for the present results to have been non-significant. Given the intense resources required to conduct psychotherapy outcome studies, in addition to the dearth of multivariate studies available, it is unlikely that there would be 576 studies missing. Thus, publication bias did not pose a threat to the interpretation of the results presented earlier.

Client Expectations, Therapeutic Alliance, and Client Outcomes

The next step of the analyses focused on the measures of client expectation for improvement in treatment. The average unadjusted random effects weighted correlation between client expectations and client outcomes was $r = .122$ ($p = < .001$) (see Table 4). Client expectations for improvement in treatment thus accounted for 1.5% of the variance in client outcomes when evaluated separately from other variables.

We next examined the degree to which client expectations contributed to improved client outcomes when accounting for the strength of the therapeutic alliance. Scholars have suggested that the alliance, in part, results from a clinician being able to manage and bridge client expectations, as well as the client's personal resources, with what the clinician believes to be the most appropriate intervention (Horvath, Del Re, Fluckiger, & Symonds, 2011). Accounting for the therapeutic alliance would therefore clarify the independent effect of client expectations on client improvement. Across nine studies, the association of client expectations with client

outcomes, when adjusted for the therapeutic alliance, yielded a small and statistically non-significant correlation of .062 ($p > .10$).

Although the univariate analyses provided an estimate of the associations, multivariate analyses are preferable. We therefore analyzed the therapeutic alliance and client expectations simultaneously. The resulting multivariate model reached statistical significance (Wald Chi Square = 68.10, $p < .001$). Across all studies, the random weighted effects correlation of the therapeutic alliance with outcome was .289 ($p < .001$) and the correlation client expectations with outcome was .058, a small value that did not reach statistical significance ($p = .38$). These findings suggest that although client expectations are associated with client outcomes at the univariate level, client expectations are not predictive of improved outcome after accounting for the alliance.

Therapist Empathy, Therapeutic Alliance, and Client Outcomes

The next step in the analyses examined the degree to which therapist empathy was associated with client outcomes before and after accounting for the therapeutic alliance. As described previously, scholars have already established the association between perceived levels of therapist empathy and improved client outcomes (Elliot, Bohart, Watson, & Greenberg, 2011). These studies have, however, involved univariate results and have not provided an estimate of how the overall therapeutic alliance impacts the association between empathy and outcome.

In this meta-analysis, the unadjusted univariate relationship between therapist empathy and client outcomes was $r = .212$ ($p < .001$). The adjusted correlation between therapist empathy and client outcomes, however, was only .128 ($p = .03$) after accounting for the therapeutic alliance.

As a subsequent step, a multivariate meta-analysis was conducted with therapist empathy and therapeutic alliance predicting client outcomes. The overall multivariate model reached statistical significance (Wald Chi Square = 65.44, $p < .001$). Across 23 studies, the association between the therapeutic alliance and client outcomes was .284 ($p < .001$); the association between therapist empathy and client outcomes was .227, a value that remained statistically significant in the presence of the therapeutic alliance ($p < .001$).

Client Attachment Styles, Therapeutic Alliance, and Client Outcomes

As with the previously examined variables, initial univariate analyses were conducted with client attachment styles, the therapeutic alliance, and client outcomes. The average unadjusted correlation between client avoidant attachment style and client outcomes across six studies indicated a very small, non-significant negative association ($r = -.075$, $p = .16$). When adjusted for the correlation between the client avoidant attachment and therapeutic alliance, the association between client avoidant attachment and improved client outcomes remained almost exactly the same ($r = -.076$, $p = .288$).

The unadjusted association between anxious client attachment style and client outcomes was also small and non-significant ($r = -.135$, $p = .46$). When adjusted for the therapeutic alliance, the association remained non-significant across five of the studies ($r = -.086$, $p = .647$).

In the multivariate meta-analysis, all three client attachment styles were included in a model along with the therapeutic alliance. This model reached statistical significance (Wald Chi Square = 71.5, $p < .001$). The therapeutic alliance remained associated with client outcomes in the presence of client attachment styles ($r = .297$, $p < .001$). Secure client attachment was not significantly associated with improved client outcomes, with a coefficient of only .11 ($p = .31$). Client avoidant attachment style also produced a statistically non-significant negative coefficient

of $-.076$ ($p = .31$). Finally, the association between anxious client attachment style and client outcomes of $-.105$ was also small, negative, and non-significant ($p = .47$). Therapeutic alliance thus remained related to client outcomes even after accounting for client attachment styles, which were not meaningfully associated with client outcomes before or after accounting for therapeutic alliance.

CHAPTER 5: Discussion

In this present study, we systematically examined the association of the therapeutic alliance with client outcomes, while accounting for the shared variance with therapist empathy, client attachment styles, and client expectations. Preliminary searches sought to identify variables which have shown to be positively associated with improved patient outcomes (e.g., Norcross & Wampold, 2011). Searches across these 16 variables (Table 1) provided minimal overlap between variables and thus all but four variables were excluded. As a result, the therapeutic alliance was identified as the only variable that overlapped with the variables of client expectations, client attachment style, and therapist empathy. Only 23 relevant research studies were identified that contained overlapping data between these variables. Univariate analyses across the variables of interest included unadjusted values (bivariate correlations that did not account for the correlation between the alliance and other variables) and adjusted values (e.g., partial correlations, beta weights), which accounted for the association between the therapeutic alliance and the other variables of interest. Across all univariate analyses, the therapeutic alliance consistently evinced a stronger association with improved client outcomes relative to the other variables (Table 4). As an additional step, we conducted three separate multivariate meta-analyses in which we examined the three other predictor variables simultaneously, in pairs, alongside the alliance. Across all multivariate analyses, the alliance remained as the sole statistically significant predictor of client improvement when examined simultaneously with the other predictor variables.

The purpose of examining partial correlations of the alliance and outcome (accounting for the presence of empathy, attachment style, and expectations) was to test whether the alliance moderates the relationship of the other variables with outcome. The hypothesized relationship

between these variables (see figure 1) proposes that the alliance would remain as the sole predictor of improved client outcomes. Each of the three separate meta-analyses that utilized partial correlation estimates were intended to test this relationship. At present, the literature cannot support a full causal relationship of the model proposed. The studies found in the extant literature can only answer whether the relationship between the presence of the alliance impacts the association of the other variables (empathy, attachment style, and expectations) with improved outcomes.

The literature is typically not designed to evaluate the multivariate relationship among these variables, and the subsequent interactions between variables, that was proposed in this study. Rather, the literature can only provide estimates of the overlap between the alliance and the other predictor variables when they are measured. The limitation of what the literature can provide regarding the overlap between these variables is due to there not currently being a coherently formed empirical or theoretical framework upon which these variables are closely associated with one another. An ideal study might include examining the predictor variables across multiple assessments and then included in a multivariate model to understand how they relate with outcome over time. In addition, a study might include a correlation matrix that includes the overlap between all predictor and outcome variables. One would expect that as the alliance continues to form, the other variables will be less reliable predictors of improvement in clients. Such a study would allow for not only an understanding of the partial correlation that exists between these variables, but also a better understanding of the causal direction of how these variables overlap.

Overview of Major Findings for the Therapeutic Alliance

All studies included in the present meta-analytic review included client outcome data as a function of the therapeutic alliance. Two of the studies contained only multivariate data and therefore were only included in the adjusted and multivariate analyses. Across 21 independent studies containing only zero-order correlations, the unadjusted value for the association between the therapeutic alliance and client outcomes was $r = .29$ ($p < .001$). Across all 23 independent studies, the adjusted value for the association between the therapeutic alliance and client outcomes was $r = .258$ ($p < .001$). The difference between those two values is very small (less than 1% of the variance), and both unadjusted and adjusted values fell within the 95% confidence interval of .25 to .30 reported in the largest meta-analytic review of the association between the alliance and client outcome (Horvath et al., 2011). The therapeutic alliance thus remains a moderate predictor of client improvement even after accounting for the presence of therapist empathy, client attachment styles, and client expectations.

Overview of Findings for Client Expectations, Attachment Styles, and Therapist Empathy

Previous research has indicated that client expectations, client attachment styles, and therapist empathy predict client outcomes; however, accounting for the presence of the therapeutic alliance resulted in more conservative estimates relative to the values obtained in previous meta-analyses specific to those variables. For instance, in the present review, client expectation was modestly correlated with client outcome ($r = .122$, $p < .001$); however, this association was reduced to a non-significant value of .07 after accounting for the therapeutic alliance.

Client attachment styles were not found to be correlated with outcomes at either the adjusted or unadjusted level. This finding runs counter to a previous meta-analytic review of

client attachment styles (Levy et al., 2011). The findings in the present meta-analysis were likely impacted by the very limited number of studies included. Further research is necessary to provide additional insight into the relationship that the alliance and attachment style share with regard to improved outcomes. The present findings do, however, provide the first attempt at synthesizing this literature and suggest that overall, an ability to develop a strong working alliance is more predictive of improvement in clients than attachment style.

The unadjusted correlation of therapist empathy with client outcome, $r = .212$ ($p < .001$), was much larger than the more conservative estimate provided by the adjusted correlation, $r = .128$ ($p = .03$). The amount of variance in client outcome explained by therapist empathy decreased substantially, from 4.5% to 1.6%, after accounting for the therapeutic alliance. Both the adjusted and unadjusted estimates were more conservative than the value of $r = .31$ ($p < .001$), established by the most recent—and far more robust—meta-analytic review specific to therapist empathy (Elliot, Bohart, Watson, & Greenberg, 2011). Given the small number of studies investigating therapist empathy in the presence of the therapeutic alliance, future research will need to ascertain the degree to which the findings in the present meta-analysis accurately reflect clients' experiences. Since therapist empathy remained correlated with client outcomes across averaged adjusted values, the benefit of therapist empathy cannot be entirely explained by the therapeutic alliance, and empathy remains a critical component of therapeutic change.

Therapeutic Alliance as a Superordinate Construct

The findings presented in this meta-analytic review provide additional evidence for the relative importance of the therapeutic alliance as it relates to improved client outcomes. To further understand these findings, the present results are best understood in the context of the theory behind the working alliance. Specifically, these findings lend support to the theoretical

assumption that the alliance is a superordinate construct that exists on a level above techniques and interventions.

The therapeutic alliance, as presently operationalized, relies largely upon Bordin's conceptualizations of the working alliance (1977). The alliance is often incorrectly conceptualized as being *the* indicator of the therapeutic relationship, rather than being *an* indicator of purposeful and collaborative work, as it was intended to be conceptualized by Bordin. Furthermore, some scholars consider the alliance to be a technique that is on the same conceptual level as empathy, feedback, or other therapeutic interventions. The alliance, however, is an indicator of a directed and meaningful relationship. This relationship is established, and subsequently maintained, by various components of psychotherapy (e.g., empathy, therapist adherence to treatment, collaborative bond). The alliance exists on a different conceptual level than the various components of psychotherapy and is a property of these components (Hatcher & Barends, 2006). Seen through this theoretical lens, the alliance is not necessarily reflective of the overall relationship, nor is it an intervention; rather, the alliance is an indication of the ability of the client and the therapist to collaboratively commit to purposeful and meaningful work that is specific to a given treatment (Hatcher & Barends, 2006).

One possible explanation of the present meta-analytic findings may therefore be that the subordinate constructs of therapist empathy, client attachment style, and client expectations are enhancing the development of a directed and shared working relationship, the superordinate construct. These variables, and many others, likely impact the development of the alliance, but once the alliance is formed, the superordinate constructs become more relevant to client improvement. A previous meta-analysis of the association between attachment style and the alliance indicated a negative and significant relationship between anxious and avoidant

attachment styles with the alliance (Bernecker, Levy, & Ellison, 2014). Similarly, other scholars have found that first session empathy predicted client ratings of the alliance, but was not predictive of outcome (e.g., Malin & Pos, 2015). The relationship between client expectations and outcomes has been shown to also be mediated by the alliance (Patterson et al., 2014). Thus, the variables appear to empirically overlap to some degree, if not necessarily theoretically. The findings here provide further evidence for a mediation effect by the alliance and suggests that the lower ordinate variables may impact the process of developing the alliance, but it is the alliance itself which has the direct effect on outcomes.

The findings presented here would suggest that the superordinate construct of the alliance, which remains as the most reliable predictor of client outcome, is above and beyond the other variables that exist at the lower conceptual level. Future research will benefit from understanding how the individual components of client, therapist, and treatment variables contribute to the development of the alliance, and whether such variables may be theoretically or empirically distinct. The multivariate analyses presented in the present meta-analytic review provides support for the notion that the alliance is a superordinate construct.

Limitations

Undoubtedly, multiple limitations characterize this meta-analytic review. The most profound limitation concerns the limited number of empirical studies available in the extant literature containing sufficient data across more than one variable of interest. Only 23 articles were located that met these criteria. In comparison, a meta-analytic review of the literature relevant to the therapeutic alliance alone contained 190 independent sources of data (Horvath, Del Re, Fluckiger, & Symonds, 2011). Although containing fewer studies than that of the therapeutic alliance meta-analysis, similar meta-analyses of the variables of empathy and

expectations each included many more studies than the present meta-analytic study contains. The previous meta-analysis of client attachment styles included a comparable number of studies as the overall number of studies found in this meta-analysis (Elliott et al., 2011; Constantino et al., 2011; Levy, Ellison, Scott & Bernecker, 2011). Although the variables of therapeutic alliance, empathy, client expectations, and client attachment styles have all been found to be related to improved client outcomes, they have not consistently been examined in the presence of one another.

Furthermore, a limitation of the study is the fact that a vast number of identified variables were searched (Table 1), yet very few variables were ultimately identified. The fact that so few articles were identified reflects a lack of synthesis and agreement across research variables. The list of terms searched had also omitted numerous other key variables that may be associated with outcome (e.g., ego-strength, reality testing, catharsis). Several variables, such as ego-strength, have been suggested but have received relatively few, if any, empirical analyses. Multiple variables, reflecting diverse theoretical and empirical perspectives, have been suggested as being associated with improved outcomes. The extant literature reflects this diversity and makes it difficult for meta-analytic methods to examine several key variables.

The lack of available multivariate research also limited the current review in that client characteristics and other potential confounding variables were not often accounted for in the results. The state of the field will be improved as researchers identify and control for potentially explanatory variables such as initial client symptoms and level of openness, insight, and willingness to engage in self-improvement during treatment. Presently, the impact of these and other potential mediating or moderating factors cannot be ascertained in the extant literature. Multivariate models that account for client characteristics and pre-treatment level of functioning

will provide a more accurate understanding of the contribution that client characteristics have on the process, and subsequent outcome, of psychotherapy.

An additional limitation of the small number of studies available was that post hoc comparisons across different measures of the constructs evaluated could not be conducted due to insufficient statistical power. Different measures of a given construct have distinct psychometric properties and may not be highly correlated with one another. For instance, measures of the therapeutic alliance do not typically share more than 50% of variance (Horvath et al., 2011). Different measures therefore capture various aspects of the working alliance and, optimally, those differences could be examined systematically. The most commonly used instruments found in this review were the HAQ and the WAI, but several other measures are also used in the literature. Furthermore, another limitation related to measurement is the source of the ratings for the measures utilized. We chose to primarily include client-rated measures and preferred these measures when given the option of both client and therapist rated measures. This was done due to previous research suggesting that therapist-rated measures tend to be less strongly associated with client outcomes. Whether the source of the rating for each measure impacted the results was not, however, able to be examined because therapist-rated measures were not consistently included.

Although combining these distinct measures is justifiable for meta-analytic purposes (Horvath et al., 2011), eventually the field will benefit from measurement-specific analyses. Those analyses, along with additional theoretical and methodological refinement of measures of the therapeutic alliance, will enable more precise data interpretations. Presently, our results and the state of the field justify only general interpretive statements.

The limitation of the available multivariate articles found in this study reflects the overall status of the field regarding multivariate research. At this time, the empirical literature has established the therapeutic alliance as one of the most important constructs in psychotherapy, yet there has not been a consistent attempt to differentiate the variance that can be attributed to the alliance from the shared variance with other relational, client, or treatment variables. Specifically, researchers have examined the alliance as a component of treatment, but have not sought out to differentiate how the alliance may differ from other aspects of treatment, as well as from other aspects of the overall broader concept of the relationship between client and therapist. The dearth of multivariate articles in the literature exists also, in part, due to the lack of consensus regarding which variables of interest can be examined alongside the alliance. Although several variables have been identified as being important to improved client outcomes (e.g., Norcross & Lambert, 2011), there has not been a consistent consensus regarding which variables would benefit from receiving future research.

Methodological issues likely exist across many of the measures of alliance, empathy, attachment style, and expectations. Scholars of the alliance have previously indicated that a halo effect, or an overlap between alliance and outcome, may occur because studies most commonly measure outcome and alliance using the same method (e.g., client-rated outcome correlated with client-rated measures of the alliance) (Horvath et al., 2011). Although these halo effects (or, more precisely, correlations) have been found, the difference between the associations of client-rated measures and therapist-rated measures were not found to be statistically significant across a large number of studies (e.g., Horvath et al., 2011). A limitation in the present meta-analytic review may, however, likely exist due to the small number of studies and that such differences were not examined due to the preference for client-rated measures when coding the data.

Similar methodological issues may also exist across measures of attachment style. For instance, a limitation of both previous attachment research and this present study is that attachment style research does not consistently control for patient pre-treatment functioning (Levy et al., 2011). Without analyzing such associations at baseline, it may be that correlations between attachment styles and reduction in symptom levels primarily reflect the association between attachment styles and overall levels of functioning.

An additional limitation found in the attachment literature is a wide range of operational definitions for styles of attachment. Although this review categorized data into consistently reported styles of attachment (avoidant and anxious), future reviews consisting of additional studies will need to identify other aspects of attachment measured in the literature and conduct analyses across those different measurement types. Specifically, we only located two studies that reported data on client secure attachment style, and thus that variable could not be analyzed in our review. In addition, attachment style research is often conducted by scholars informed by the psychodynamic tradition, while the constructs of expectations and empathy are more pan-theoretical in nature. This suggests that interactions of methods/measures with researcher allegiance could be evaluated in future reviews containing additional studies.

Limitations are also found in the conceptualization and measurement of therapist empathy. Although therapist empathy has been theorized as a distinct construct (e.g., Elliot et al., 2011; Rogers, 1952), it likely overlaps with a host of other variables, such as genuineness, acceptance, warmth, and many interpersonal skills. Empathy likely also overlaps substantially with aspects of the therapeutic alliance, such as affective bond, goal consensus, and collaboration (Wampold & Imel, 2015). Fundamental problems can furthermore occur when attempting to encapsulate and quantify an abstract construct such as empathy; for instance, therapists can vary

in their use of reflection and confrontation. When a therapist disagrees with or confronts a client, the degree of the previously perceived agreement and understanding subsequently appear diminished from the client's perspective. Certainly, empathy is not a one-time event, such that any overall rating may fail to adequately account for its complexity. As an example, measures of empathy taken after a particularly difficult session, or a measure after an alliance rupture, may be more indicative of the immediate ego-strength of the client after such a session, rather than the true experience of therapist empathy. Moreover, for some clients, quantitative occurrences of therapist empathy may not be as important as other skills employed by the therapist, possibly leading to clients who value the therapists' other skills conflating a rating of therapist empathy by including the skills that are more salient from the client's perspective.

Limitations specific to the construct of client expectations for improvement in treatment also characterize this meta-analytic review. Specifically, client expectations likely change over the course of treatment, but we purposefully restricted our analyses to client expectations at the start of treatment. This decision enabled aggregation of data across studies and allowed for the plausible causal influence of expectations on subsequent experiences in treatment. Such causal inferences could not have been made as cleanly with data collected in later sessions, given the interactions between a client's experiences in treatment and their subsequent expectations for improvement. A future line of inquiry might assess how expectations later in treatment relate to outcome above and beyond the contributions of the therapeutic alliance. Measures of expectations collected later in treatment will likely better predict outcome even after controlling for the therapeutic alliance, but the number of other variables needing to be accounted for would highly complicate that line of research. Furthermore, it remains to be seen to what degree low client expectations may impact the early development of the alliance, and how these low

expectations may impact client attrition rates. It may be that clients with moderate to high levels of expectations are able to develop a strong alliance, while those with low expectations discontinue treatment or remain wary of the therapeutic relationship.

A final limitation of the meta-analysis concerns the nature of the samples used in the studies located. Most of the clients were women, so the results more accurately represent the experiences of women in therapy than men. Similarly, the vast majority of the clients were White/Caucasian, so the present results do not represent the experiences of clients of color. As the field increasingly emphasizes the importance of culturally sensitive treatments (Smith & Trimble, 2015), future research will need to verify if the constructs of the therapeutic alliance, therapist empathy, and client expectations, and attachment styles remain equally salient across gender and cultural groups.

Future Directions

The field has consistently investigated univariate relationships between components of psychotherapy (e.g., homework), therapist characteristics (e.g., empathy), client characteristics (e.g., client expectations, attachment style, readiness for change), therapeutic alliance, and improved outcome. Many studies examine these variables in a virtual vacuum, without consideration of shared variance. This present meta-analytic review highlights the current limitations of focusing on univariate analyses. Specifically, multivariate analyses provide more accurate estimates of the relative contributions of variables to clients' outcomes in psychotherapy. That is particularly the case when considering superordinate variables, such as the alliance.

One explanation for the relative scarcity of multivariate studies is a lack of consensus regarding which components of psychotherapy are most relevant to improved outcomes. A

variety of relational, client, and treatment variables improve client outcomes (Norcross & Lambert, 2011). Common factors and therapist variables also contribute to outcome (Grencavage & Norcross, 1990; Lambert & Barley, 2001). Psychotherapy involves potentially dozens of factors. A future focus on multivariate research may help to identify which ones are the most essential, after accounting for the contributions of other factors. This may also encourage an understanding of how the alliance, or other superordinate variables, mediate the relationship between other variables and outcome.

A related reason for the abundance of univariate research is the fact that researchers tend to focus on particular lines of inquiry, limiting their investigations to a single variable or set of closely related variables. Although specialization among researchers enables greater depth of expertise, the resulting fragmentation slows the collective pace of the field. Future scholarship focusing on the synthesis of research findings (e.g., Norcross, 2011) may help direct and guide future inquiry. As a specific example, one might consider the work of Norcross and colleagues (i.e., Norcross, 2011). This work is undoubtedly the most comprehensive synthesis of variables that have been shown to be associated with improved client outcomes. However, each study is presented in the text chapter by chapter, as though each variable is distinct and does not overlap with other variables. The degree to which these variables overlap (if they overlap at all), either theoretically or empirically, remains to be examined. From the limited source studies identified in the present study, it appears, however, that at least some of the variables do indeed overlap to some extent. Further theoretical and empirical work may benefit from a more multifaceted understanding of how psychotherapy works.

Another future consideration involves refined operationalization of constructs. Constructs such as the therapeutic alliance remain broad, with different scholars emphasizing

different components. Future research addressing the theoretical and operational differences in conceptualizations and measurements may allow for a more detailed understanding of the overall construct. For instance, some researchers may erroneously consider the alliance to be a component of psychotherapy or indicative of the broader construct of the relationship (Hatcher & Barends, 2006). Bordin's conceptualization of the working alliance heavily emphasized the purposeful and collaborative nature of the therapeutic relationship (Bordin, 1977); as a result, disagreements in the field lead to various measurements (e.g., Gelso, 2011) or conflate the working alliance with overall bond, rather than the overall working relationship. Conceptual differences may thusly contribute to reliance on univariate studies. Future scholarship that optimally engage diverse parties, including active collaboration between scholars and clinicians, may allow for further refinement of existing conceptualizations and measurements.

Future research may also benefit from sorting out several issues related to the measurement of the therapeutic alliance. Specifically, scholars can investigate how skewed ratings of the alliance have been impacting (likely attenuating) research results. Scholars can also identify the degree to which measures of the working alliance can be differentiated from measures of global bonds or general likeability. Alliance measures distinct from overall positive experiences, or general likeability, will allow for a better understanding of the unique role that the working alliance has with client outcome.

Given the increasing diversity of contemporary society, it is recommended that researchers also address the degree to which the construct of the working alliance applies to clients from a variety of cultural backgrounds. Western values and assumptions have clearly influenced not only the structure and methods of psychotherapy, but potentially also the construct of the therapeutic alliance. Future research may therefore benefit from evaluating

findings across distinct client populations. For instance, the development of the alliance and the degree to which the variables of therapist empathy, client attachment style, and client expectations for improvement might differ in their relevance to symptom reduction for clients with different cultural worldviews. The intersections of the alliance with such variables as client acculturation and acculturative stress, cultural adaptations to treatments, and therapist multicultural competence can help to enhance our knowledge about what works best for each client seeking mental health services.

Future research may furthermore benefit from accounting for missing data that results from client attrition. On average, about 20% of clients discontinue treatments prematurely (Swift & Greenberg, 2012). Because clients who discontinue psychotherapy tend to have experienced a weaker working alliance than the clients who complete treatment (Sharf, Primavera, & Diener, 2010), accounting for client discontinuation will help to reduce the adverse effects of selection bias. Primary studies reporting intent to treat data alongside data from clients who complete treatment will provide a much more accurate understanding of the degree to which the alliance predicts symptom reduction. Accounting for the experiences of clients who do not complete the prescribed plan of treatment may provide further insights regarding client outcomes.

Finally, future research may benefit from looking at client changes over time. Longitudinal data allows for growth curve modeling and an examination of session-by-session changes. Understanding how variables such as empathy and the alliance develop over time—and subsequently relate to outcome—may provide beneficial insights. This may also allow for an understanding of what works for whom, rather than what works for most, as growth curve models and group-based models will allow for more sophisticated statistical analyses.

Conclusion

The present meta-analytic review provides empirical evidence that the therapeutic alliance remains a significant predictor of client outcomes even after accounting for the contributions of therapist empathy, client attachment style, and client treatment expectations. In our analyses, the therapeutic alliance was the only variable to remain statistically significantly associated with client outcome across three multivariate models. These findings provide evidence for the theoretical notion that the alliance may be superordinate to other components of therapy.

Despite the clear patterns in the data, the relatively small number of studies available in the literature qualify these results, which must be interpreted as preliminary. The fact that so few multivariate studies were located in the literature can alert researchers about the pressing need for future multivariate studies. Psychotherapy involves many considerations, and researchers accounting for multiple considerations at the same time will be better able to interpret the associated complexity. The world is multivariate, and it is time for researchers to use multivariate designs to a much greater extent than has been the case in the literature up to this point. It is time to shift from construct-specific lines of research to complex models that account for overlap and interaction. The statistics for conducting such research are available. The field simply needs a cultural shift, moving beyond researchers' narrow interests delineating a line of inquiry.

Psychotherapy exists, and is practiced, in the context of multiple client, therapist, and treatment variables, all of which exert their influence upon outcomes simultaneously. The extant literature may benefit from reflecting the complexity of this reality. Without these empirical estimates, clinicians and scholars are relegated to anecdotal evidence or conjecture regarding

why psychotherapy is efficacious. Clients improve when the process of psychotherapy facilitates a healing environment that is attentive to the needs and worldviews of the client. Such a process is inherently guided by theory, empirical evidence, clinician experience, and respect for the experiences of the client. For the sake of the clients we serve, and the science of psychotherapy, future research can establish a more accurate understanding of how to best foster such an environment and promote change in clients.

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Table 1

Literature Search Results Across 16 Variables Associated with Psychotherapy Outcomes

Psychotherapy Variable of Interest	Search Results	Articles Retrieved	Articles with Multiple Factors
Therapeutic Alliance	2037	328	53
Empathy	382	14	13
Positive Regard	248	19	5
Congruence	230	20	10
Collecting Client Feedback	1224	11	0
Stages of Change	320	18	6
Client Expectations	1589	30	9
Attachment Style	445	29	9
Collaboration	114	20	8
Help-seeking Behavior	1203	30	0
Treatment Preference	1268	17	0
Alliance Ruptures	290	19	5
Managing Countertransference	396	18	2
Resistance/reactance	284	16	3
Coping Styles	270	11	0
Homework completion/compliance	424	34	8

Table 2

Studies with Overlapping Data by Topic

Overlap Between Variables of Interest (Final Variables Only)	Therapeutic Alliance	Empathy	Client Attachment Style	Client Expectations
Therapeutic Alliance	-	-	-	-
Empathy	7	-	-	-
Client Attachment Style	7	1	-	-
Client Expectations	9	0	0	-

Table 3

Characteristics of 23 Studies of the Association Between Attachment Styles, Client Expectations, Therapist Empathy, Therapeutic Alliance and Outcome

Characteristic	<i>M</i>	Number of studies (k)	%
Year of report	2004		
1980 – 1989		4	17
1990 – 1999		0	0
2000 – 2008		19	83
Publication status			
Published		15	65
Unpublished		8	35
Treatment Site			
Outpatient Treatment		19	83
Mixed Outpatient and Inpatient Treatment		2	9
Missing		2	9
Treatment Type			
Bona Fide Individual Treatment		18	78
Bona Fide Individual Treatment with Psychotropic Medication		3	13
Bona Fide Individual Treatment with Additional/Adjunct Treatment		2	9
Controlled for Symptoms at Intake			
Yes		11	48
No		11	48
Not Reported		1	4

Primary Diagnosis

No Diagnosis Given	11	48
Depressive Disorder	5	22
Anxiety Disorder	3	13
Eating Disorder	1	4
Different Diagnoses across the Sample	3	13

Sample size 71.9

< 50	11	48
50 – 99	5	23
100 – 147	7	29

Participant age^a 33.6

Young Adults (19-29 yrs.)	5	26
Middle-aged Adults (30-55 yrs.)	18	74

Participant gender (% Female) 63.9

Participant race^b (%)

White/European Americans	67.1
African American	7.8
Asian American	2.2
Hispanic/Latino(a) American	3.9
Native American Indian	0.6

Other	3.8
Canadian or British	14.6

Note. Not all variables sum to the total number of studies due to missing data.

a = Average age category of participants within studies (not all participants necessarily in the category listed)

b = The racial composition of participants across all studies, calculated by multiplying the number of participants within studies by the percentage of participants from each racial group and dividing that product by the total number of participants.

Table 4

Univariate Analyses Across Variables

Variable	<i>Q</i>	<i>p</i>	<i>r</i>	95% CI	<i>k</i>
Unadjusted values					
Therapeutic alliance	37.7	.011	.29	[.244, .341]	20
Client expectations	17.0	.018	.122	[.009, .232]	8
Avoidant attachment	3.1	.689	-.075	[-.178, .03]	6
Anxious attachment	33.0	<.001	-.135	[-.459, .221]	5
Therapist empathy	4.6	.471	.212	[.096, .324]	6
Adjusted values					
Therapeutic Alliance	50.9	<.001	.258	[.182, .33]	23
Client expectations	27.8	<.001	.062	[-.072, .194]	9
Avoidant attachment	5.2	.266	-.076	[-.214, .064]	5
Anxious attachment	34.4	<.001	-.086	[-.424, .274]	5
Therapist empathy	7.5	.281	.128	[.001, .241]	7

Note. *k* = number of studies; *Q* = *Q*-value for variance within groups, an indicator of homogeneity.

APPENDIX: Coding Sheet

Psychotherapy Alliance and Related Variables

- A. Short Description:
 For Authors with only one article included in our study: Last name of main author and the last two digits of year (ex. Belavich 98).
 For authors with multiple studies in one article: Last name + last two digits of year + lower case letter (ex. Levin 99 a, Levin 99 b....etc.)
- B. APA Citation: Author, B., & Colleague, J. (Year). Title of article. *Journal Title*, Vol, pages
- C. Published 0 = no 1 = yes
- D. Year of study publication (or year of defense if dissertation)
- E. Coder's names
- F. Mean Age of Clients (of the participants included in this row, effect size)
- G. Percentage of Female Clients (of the participants included in this row, effect size).
 Report as whole number: 7 =7% (Omit the percentage sign)
- H. Ethnicity Reported for Clients: 0 = no (leave columns H through O blank) 1 = yes
- I. Percent White/Caucasian American (of the participants included in **this** row – same for all below)
- J. Percent African American
- K. Percent Hispanic/Latin American
- L. Percent Asian American
- M. Percent Native American
- N. Percent “other” North American (race not specified or not included in one of the above)

For studies conducted outside the United States, or international students, use the following:

- O. Percent White International (European, Australian, Canadians, etc. not in US)
- P. Percent “other” International (Central/South American, Asian, African, not in US)
- Q. Treatment location: 1 = outpatient, 2 = inpatient, 3 = mixed
- R. Presence of clinical diagnosis (blank = no information)
 0 = non-clinical/without formal diagnoses
 1 = mental health diagnoses provided
 2 = diagnosed and clients described as “severe” or with high symptom distress
- S. Primary diagnosis of sample:
0. no diagnosis/condition mentioned
 1. Major Depressive Disorder (Depressive Disorders NOT including Bipolar)
 2. Anxiety Disorder (All anxiety disorders)
 3. Bipolar Disorder
 4. Traumatic Disorders
 5. Personality Disorders
 6. Eating Disorders
 7. Obsessive Compulsive Disorder
 - 8.

9. Mixed Group (e.g., Major Depressive Disorder and Generalized Anxiety Disorder)

- T. Comorbid substance-abuse disorder: 0 = no, 1 = yes; Put if 50% or more participants admit a substance abuse problem (does not have to be formally diagnosed)
- U. Comorbid mental illness diagnosis, in addition to primary diagnosis: 0 = no, 1 = yes
- V. Treatment type:
 1= bona-fide individual treatment
 2= bona-fide individual treatment with psychotropic medication
 3= bona-fide treatment with additional/adjunct form of treatment/intervention (e.g., group, exercise/diet regimen, etc.)
- W. Comparison group type:
 0 = wait list
 1 = support group or placebo/informational meeting
 2 = bona fide treatment
 3 = mixed (more than one of the above)
- X. Design type
 1 = Experimental (≥ 2 groups, outcome data compared to a control group)
 2 = Pre- to post-test comparison (single group over time– not compared to control group)
- Y. Randomization to treatment/control group: 0 = No (or unspecified), 1 = Yes
- Z. Status used (if there are unadjusted and adjusted for beta, then put “2” because we are most interested in beta)
 1 = Zero order correlations (Pearson r)
 2 = Partial correlations, beta weights (regression), path coefficients
 3 = ANOVA or MANOVA (F -tests)
 4 = t -test
 5 = Odds ratios or log odds ratios
 6 = Chi square
 7 = Means & Standard Deviations, or d (mean diff)
 8 = ANCOVA (analysis of covariance) - be sure to code covariate
 9 = P value only reported, r computed as estimate
 10=Mixed, more than one of the above (particularly for aggregates)
- AA. Statistically controlled for pre-test means on **outcome** measure (DV) 0 = no, 1 = yes
- AB. Statistically controlled for **treatment-relevant (other process)** measure(s) 0 = no, 1 = yes
- AC. Statistically controlled for other variables (client characteristics, etc.) 0 = no, 1 = yes
- AD. Effect size type on this row
 Note: Studies must have “1” in the final row pertaining to that study
1. **Overall adjusted** (partial/beta) coefficients w/ outcome (or weighted avg. of 2s & 3s)
 2. **One of several** coefficients with client outcome (when many measures)
 3. **Subgroup** of data (by gender, diagnosis, etc.) - correlations with client outcome

Effect sizes

For r , enter the value.

For all other types of effect sizes, convert the value to r using the effect size software.

Positive values = beneficial effect of process variable on client outcome

Negative values = harmful effect of process variable on client outcome

For aggregate effect sizes based on adding up subgroups (6), *weight the overall ES calculated by the N of each subgroup.*

Alliance

AE. Unadjusted correlation coefficient for measure of Alliance with client outcome

AF. Unadjusted (partial/beta) correlation coefficient for measure of Alliance with client outcome

Expectations

AG. Unadjusted correlation coefficient for measure of Client Expectations with client outcome

AH. Unadjusted correlation coefficient for Client Expectations with Therapeutic Alliance

AI. Adjusted correlation coefficient for measure of Client Expectations with client outcome

Attachment Styles

Secure Attachment

AJ. Unadjusted correlation coefficient for Client Secure Attachment with client outcome

AK. Unadjusted correlation coefficient for Client Secure Attachment with Therapeutic Alliance

AL. Adjusted correlation coefficient for Client Secure Attachment with client outcome

Avoidant/Fearful Attachment (or anxious avoidant)

AM. Unadjusted correlation coefficient for Client Avoidant/Fearful Attachment with client outcome

AN. Unadjusted correlation for Client Avoidant/Fearful Attachment with Therapeutic Alliance

AO. Adjusted correlation coefficient for Client Avoidant/Fearful Attachment with outcome

Anxious/Preoccupied/Ambivalent Attachment (or anxious ambivalent)

AP. Unadjusted correlation coefficient for Client Anxious/Preoccupied/Ambivalent with outcome

AQ. Unadjusted correlation for Client Anxious/Preoccupied/Ambivalent with Therapeutic Alliance

AR. Adjusted correlation coefficient for Client Anxious/Preoccupied/Ambivalent with outcome

Empathy

AS. Unadjusted correlation coefficient for measure of Therapist Empathy with client outcome

AT. Unadjusted correlation coefficient for Therapist Empathy with Therapeutic Alliance

AU. Adjusted correlation coefficient for measure of Therapist Empathy with Client Outcome

AV. Treatment group sample size (or total N for single group design)

AW. Control group sample size (or total N repeated for single group design)

Optimally, base your estimate of N off of the degrees of freedom or N used in the specific analysis, with degrees of freedom between being # of groups minus one and degrees of freedom within being the number of participants minus the number of groups.

- AX. Attrition percentage (percentage of clients who dropped out or were otherwise not included in the effect size data, the denominator being the total number of participants *who started treatment*).
- AY. Primary or Secondary Outcome. For THIS row, the outcome measured is:
 1 = Primary (exactly matched with the intervention provided) = the intervention should clearly change this variable; for instance, if providing psychotherapy and the outcome is a mental health variable
 2 = Secondary (indirectly related to the intervention provided) = not a variable directly targeted by the intervention; for instance, if providing psychotherapy, and the outcome is social support
- AZ. Type of outcome measure (DEPENDENT variable)
 0= general happiness or positive wellbeing (self-esteem, etc.)
 1= general mental health symptoms (GAS, OQ-45, SCL-90, MMPI, *multiple symptoms*)
 2= specific mental health symptom (anxiety, depression, phobia, etc.) or diagnosis
 3=
 4= more than one of the above (for aggregates, across several types)
- BA. Name of outcome measure
- BB. Source of data for outcome measure
 0= cannot determine
 1= client / patient (self-evaluations)
 2= therapist
 3= external observer
 4= mixed (more than one of the above)
- BC. Time of data collection for outcome measure (average number of sessions at post-test)
 Blank = cannot determine
 1 = after intake or one session of therapy
 Otherwise enter the average number of sessions at which the post-test was administered: e.g., 6 = six sessions, 12 = 12 sessions, etc.

Alliance Measure

- BD. Name of Measure of Alliance
- BE. Time of data collection of Alliance measure
 Blank = cannot determine
 1 = after intake or one session of therapy
 Otherwise enter the average number of sessions at which the process variable was measured
- BF. Source of Alliance rating: 0 = client, 1 = therapist, 2 = external observer, 3 = mixed

Other Measure (Expectancy, Attachment, or Empathy)

- BG. Name of Measure (of Expectancy, Attachment or Empathy)
- BH. Time of data collection of other measure

Blank = cannot determine

1 = after intake or one session

Otherwise enter average number of sessions at which the variable was measured

BI. Source of data for this measure: 0 = client, 1 = therapist, 2 = external observer, 3 = mixed

Additional Other Measure (Expectancy, Attachment, or Empathy; code only if multiple process variables are in the study – otherwise leave blank)

BJ. Name of Measure (Expectancy, Attachment, or Empathy)

BK. Time of data collection of other measure

BL. Source of data for this measure: 0 = client, 1 = therapist, 2 = external observer, 3 = mixed

BM. Verbal descriptions/problems and clarifications of this study (IF NECESSARY)

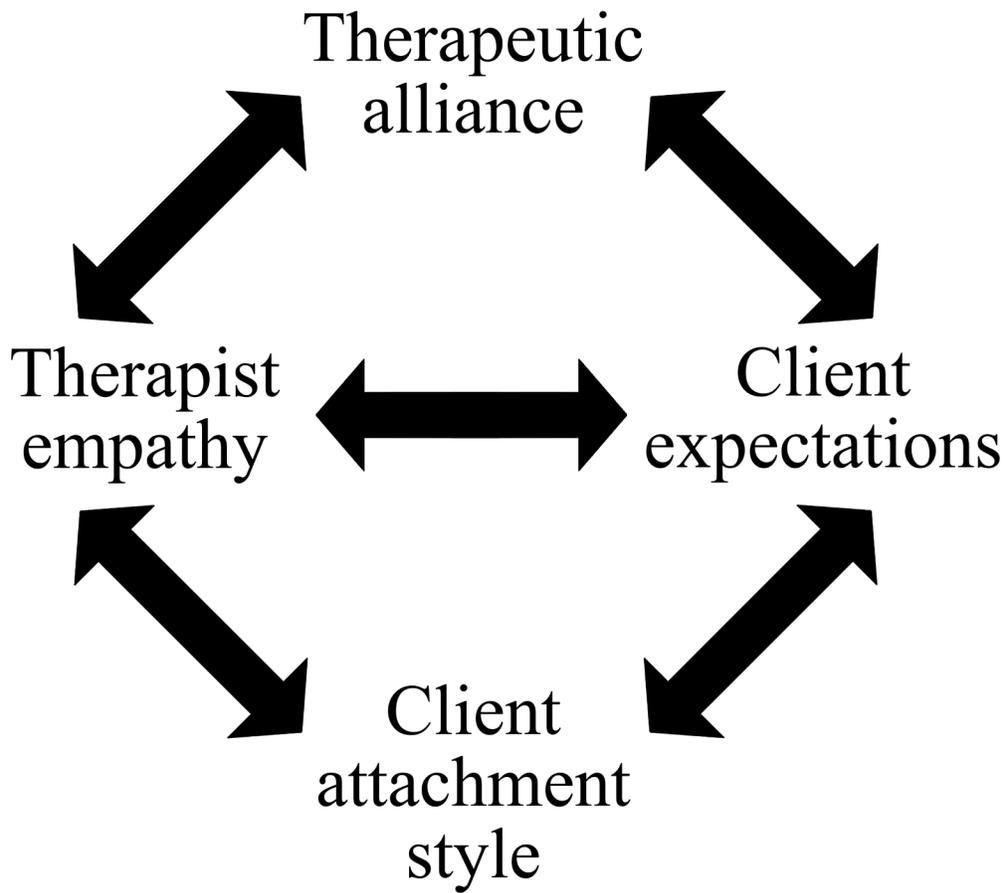


Figure 1. Proposed theoretical interaction between variables.

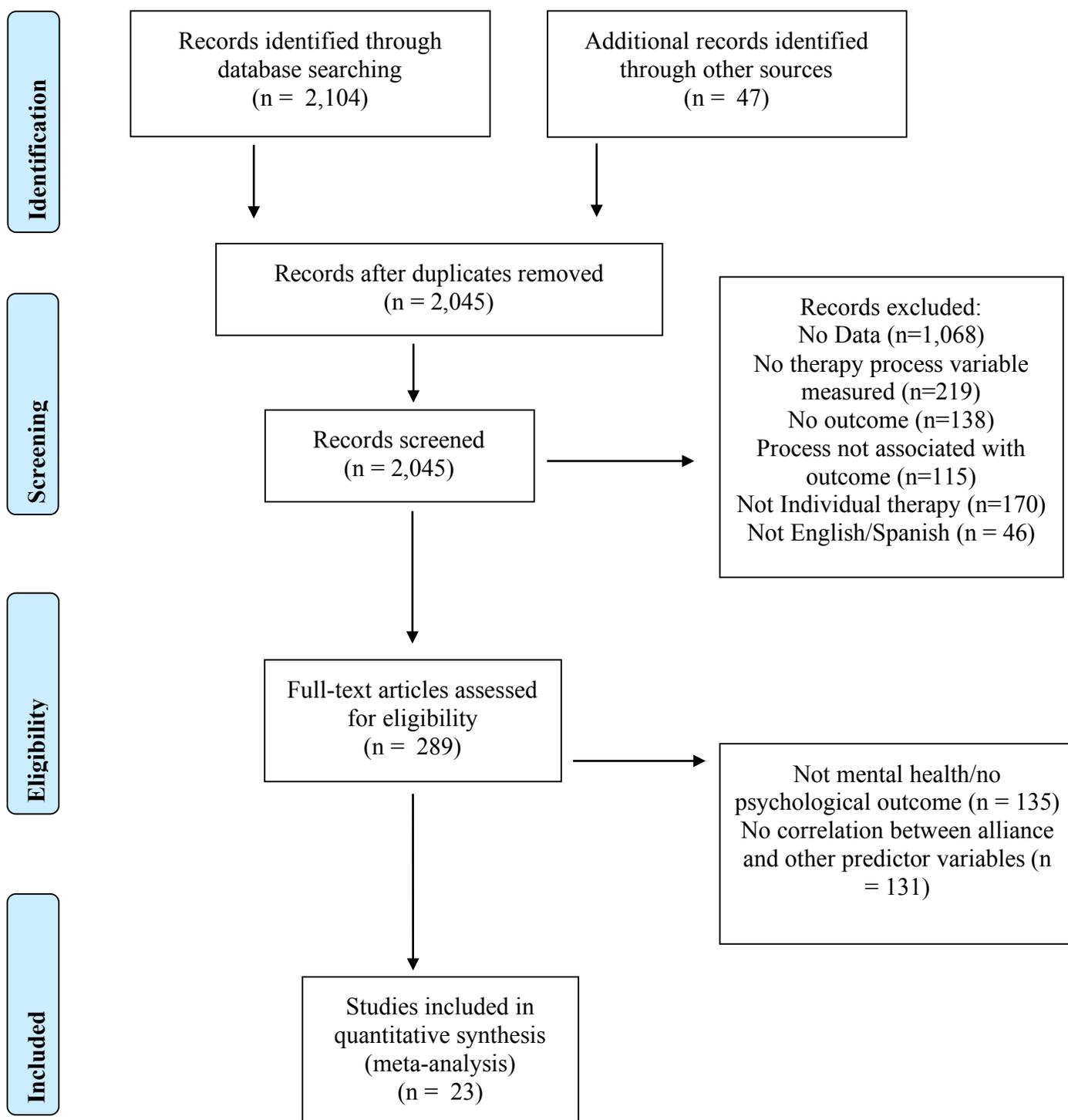


Figure 2. Flow chart of studies included in meta-analysis.

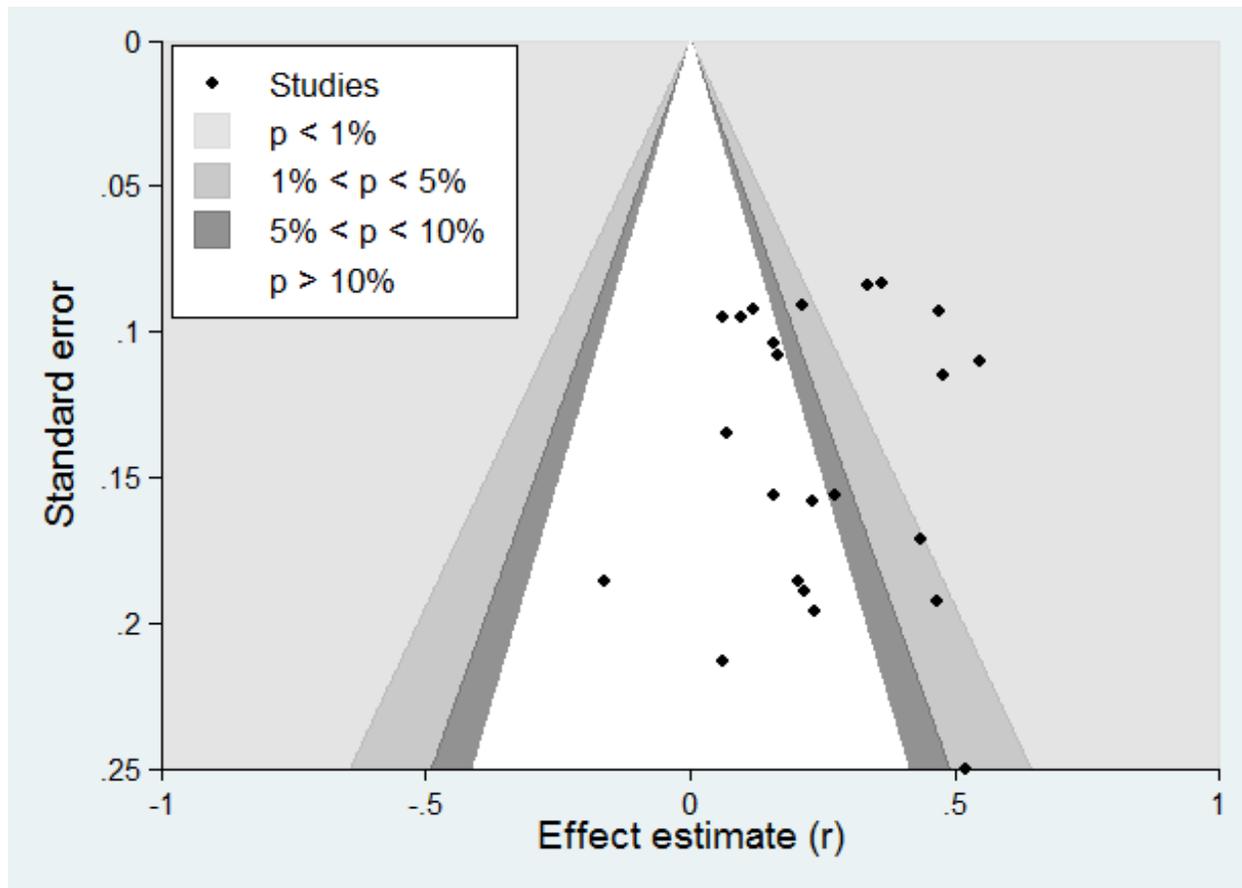


Figure 3. Contour-enhanced funnel plot of effect sizes (Pearson's r) by standard error for 23 studies of the adjusted association between the therapeutic alliance and client outcomes.

Therapeutic Alliance

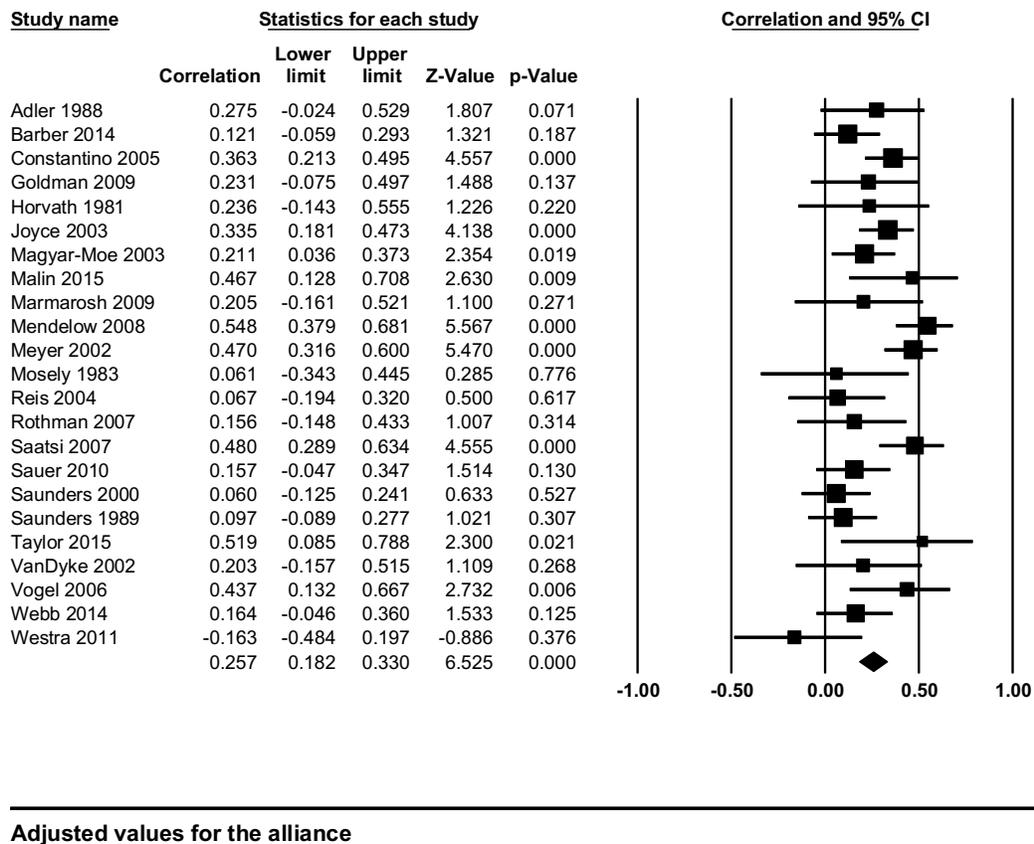


Figure 4. Forest plot of adjusted therapeutic alliance effect sizes.