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The Association Between Adult Attachment and the Therapeutic Alliance: A Meta-Analytic Study

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ABSTRACT

The present meta-analysis was conducted to determine the association between adult attachment style and the therapeutic alliance. Both anxious attachment and avoidant attachment were predicted to correlate negatively with alliance, as the therapeutic alliance is an adult, interpersonal relationship that could be influenced by an individual's attachment style. Random-effects models was used to determine the mean product-moment correlation (*r*) for 15 studies. The mean weighted *r* for attachment avoidance and the therapeutic alliance was -.16, 95% *CI* [-.28; -.11], $p < .001$, and the mean weighted *r* for attachment anxiety and the therapeutic alliance was -.19, 95% *CI* [-.23; -.09], $p < .001$. The results of the meta-analysis are further discussed from an attachment theoretical perspective. The implications for future research and clinical applications are discussed.

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Chapter 1

Introduction

The therapeutic alliance has been widely supported as an important and reliable predictor of therapeutic outcome across treatment type, course of therapy, and from the perspectives of the client, therapist or observer (Horvath, 2001). The therapeutic alliance was borne out of psychoanalytically based theories, first by Freud (1913), and then expanded by Sterba (1934), Menninger (1958), Zetzel (1956), and Greenson (1967). The original conceptualization of the therapeutic alliance was coined by Greenson (1967) as the "working alliance" (now referred to as the therapeutic alliance) and emerged from research into transference in psychoanalytic psychotherapy. Based on Greenson (1967), Bordin (1979) proposed an interpretation of the relationship that develops between a psychotherapy client and their therapist that consists of three elements. The first of these elements is aligned goals to reach as the targets of what therapy should accomplish. The second element is agreement on the tasks or steps that the client and the therapist take to achieve their goals. The third element of alliance is the development of a bond between the client and the therapist based on mutual trust and understanding. All three of these elements contribute and affect the overall therapeutic alliance.

Many empirical studies have been conducted to investigate the relation between alliance and therapeutic outcome. These studies ranged in treatment type from Cognitive Behavioral Therapy (CBT) (Conners et al., 2016; Zilcha-Mano et al., 2016), Dialectical Behavioral Therapy (DBT) (Bedics et al., 2015; Turner, 2000), and psychodynamic therapy (Horwitz et al., 1984; Marmar et al., 1989). Within the research field of alliance and outcome, previous studies have

included ratings of alliance reported by the client (Weiss et al., 2014; Zilca-Mano & Errázuriz, 2017), therapist (Cronin et al., 2014), and observers (Weck et al., 2015). While almost all of the studies find positive effect sizes between alliance and therapeutic outcome, the effect sizes varied greatly. With the depth of research into this association, a series of meta-analyses have been conducted to synthesize these findings. The first major meta-analysis to examine a relation between alliance and therapeutic outcome found a small but significant positive correlation between the two constructs ($r = .26$, $p < .05$) regardless of number of participants, length or type of treatment, nor publication status (Horvath & Symonds, 1991). Nearly a decade later, an updated meta-analysis was conducted which synthesized nearly triple the number of studies of its predecessor, and found nearly identical results (Martin et al., 2000). The weak to moderate positive association between alliance and outcome were once again supported by Flückiger et al. (2018). In this meta-analysis, the largest thus far with almost 300 articles, the researchers found an effect size of $r = .28$ ($p < .001$). Flückiger et al. (2018) found the therapeutic alliance to be a predictor of therapeutic outcome across theoretical orientation, national origin of the research, and patient characteristics.

Further, with consistent support for the relation between therapeutic alliance and therapeutic outcome, new lines of research have developed to investigate moderators of alliance. Investigating these moderators allows us to examine how alliance functions as a predictor of therapeutic outcome. These clarifying investigations are important because understanding what moderates alliance can help us understand why, even though alliance is a consistent predictor, the relation between alliance and outcome is only weakly to moderately strong. Potential moderators to the relation between alliance and therapeutic outcome are interpersonal differences between clients, or client-factors. Understanding first what these client-factors are and then what

the client factors tell us may fine-tune our conceptual understanding of alliance because understanding what disrupts and what does not disrupt alliance formation informs our understanding of how alliance develops. If a specific client-factor is found to be a moderator of alliance, then the component of alliance it acts upon could be targeted in the early stages of therapy to, improve alliance and thus outcome.

Three prominent literature reviews (Clarkin & Levy, 2003; Constanguay & Beutler, 2006; Constantino et al., 2002), summarized client factors that may be moderators of alliance. Among these factors were symptom severity (with those having more severe symptoms or hospitalizations having lower alliance ratings), certain personality disorders such as borderline personality disorder, client-therapist match, and intrapersonal, cognitive factors. Each of these client-factors inform our understanding of alliance. For example, Clarkin and Levy (2003) proposed attachment style as a potential client-factor because the client's previous attachment history could provide a schema for the development of a future relationships, like the one between the client and their therapist. Following this proposal, this thesis will focus on attachment style as a potential moderator of alliance.

John Bowlby's attachment theory (Bowlby, 1969) describes how a child's relationship with their primary caregiver provides a basis for later interpersonal adult relationships. Infants who had warm, reliable, and responsive caregiving developed what Bowlby termed a secure attachment style, characterized by the capacity for intimacy and connection with others. In contrast, infants with inconstant and less responsive caregiving exhibited insecure attachment styles. Bowlby (1982) theorized that this relationship did not end with childhood, rather it served as a basis for future relationships. This has been supported by longitudinal research into attachment patterns overtime that show they are stable (Bretherton, 1985) yet still may change in

the face of major life events (Farley 2002; Waters et al., 2000). Bowlby believed that the behaviors associated with having to seek attachment figures when an infant was abandoned would remain as the infant developed into an adult. These behaviors would be manifested in how the developing person would relate to others in friendships, romantic relationships, and in clinical settings. Indeed, as predicted by Bowlby, current theoretical understandings of alliance suggest that alliance is built on a client's past relationships (Gaston, 1990; Piper et al., 1991; Horvath & Luborsky, 1993).

Furthermore, Bowlby (1973) theorized that a child's mental representations of their primary caregiver, based on how the caregiver addressed their needs, can greatly impact the child's internal working models of others in adulthood. These internal working models underly the behavioral differences between secure and insecure attachment. The theoretical implications for attachment-based internal working models have been summarized in several reviews including Blatt and Levy (2003) and Bretherton (1992). Primary caregivers who are attentive to their infants provide their children with a model of others that is intrinsically supportive. The internal working model and cognitive structure of those with attachment security may also allow for securely attached individuals to tolerate separation without becoming anxious or detached. This is because those with attachment security have internal working models of others that are characterized by trust and autonomy, like they experienced in childhood with their primary caregiver.

However, if a child has a primary caregiver who is unresponsive to the child's needs, then the child will develop internal models of others that are characterized by mistrust and rejection. The child will also be less able to tolerate separation, leading to anxiety or detachment around the possibility of abandonment. Trust in others, belief in others' good intentions, and the

ability to form interpersonal, emotional relationships are hallmarks of one with secure attachment style whereas more negative views of others and the intentions of others are characterized by insecure attachment (Bowlby, 1973).

These attachment-based internal working models could moderate alliance formation. The ability to form a strong working alliance depends on the client being able to agree with the therapist on goals, tasks, and create a strong, interpersonal bond. This agreement is difficult when the client does not trust the therapist and believe in their therapist's good intentions. Trust in the therapist, belief in the therapist's good intentions, and the creation of a strong, interpersonal bond as well as agreement between the client and therapist should be more likely to occur with securely attached clients, who have positive internal working models of others developed though a secure attachment to their primary caregiver. Comparatively, clients with insecure attachment may be less likely to have an inherently positive view of the therapist themselves, making it more difficult for them to agree with the therapist's outlined goals, tasks, and form a strong bond that is necessary for the working alliance.

To add nuance to the relationship between attachment and alliance, insecure attachment is delineated between attachment anxiety and attachment avoidance. These two dimensions of insecure attachment were identified by Ainsworth et al. (1978) after they conducted a discriminatory factor analysis on infant attachment based on Ainsworth's Strange Situation (Ainsworth & Bell, 1970). Attachment anxiety is characterized by a preoccupation with being close to an attachment figure and anxiety in the face of abandonment or separation. On the other hand, attachment avoidance is characterized by detachment from attachment figures and indifference concerning separation (Blatt & Levy, 2003). As described in Blatt and Levy's (2003) review of attachment theory, the two polarities of insecure attachment have their own

phenotypes in psychopathology and in their attachment-based internal working models, described in more detail below.

Clients with attachment anxiety may more readily agree with a therapist's proposed goals and tasks in an effort to endear their therapist to them to protect against abandonment and disappointment by the therapist. This is because someone with attachment anxiety is preoccupied with the threat of separation believes that perceived disappointment or criticism that may come from them disagreeing with the therapist's plan for therapy will result in abandonment (Dozier, 1990; Levy et al., 2011). Formation of a strong bond may also be hindered because attachment anxiety may cause hyperawareness of any signs of rejection or criticism from the therapist which, in turn, increases the tumultuousness of the client's relationship with the therapist (Mikulincer & Shaver, 2007, Chapter 6).

Comparatively, clients with attachment avoidance differ from clients with attachment anxiety in that they dismiss their own need to form interpersonal relationships in the first place. Attachment avoidance is characterized by not seeking and retreating from help (Dozier, 1990). This is because those with attachment avoidance, like those with attachment anxiety, have internal working models based on their experiences with their primary caregivers of others as being unreliable. Therefore, they feel they must detach themselves from other relationships as a protective measure to avoid abandonment. Those with attachment avoidance may be unwilling to even consider agreement on shared goals and tasks due to their emotional distance from the therapist, much less form a strong bond with them (Mikulincer & Shaver, 2007, Chapter 14).

If attachment and alliance are related, then determining the strength of this relation is important as attachment may be a moderator for the development of alliance. Previous empirical research investigating this relation has found conflicting results. Most studies find a negative,

small to moderate correlations between both attachment anxiety and the therapeutic alliance as well as attachment avoidance and alliance, but some studies find non-significant effect sizes (Sauer et al., 2010) or even small to moderate positive correlations between each of the two dimensions of insecure attachment and alliance (Britton, 2005; Coljin et al., 2014; Smith et al., 2012; Stewart et al., 2005). Some studies even found positive effects for attachment anxiety and alliance with a negative effect for attachment avoidance and alliance (Frehling, 2005) or vice versa (Goldman & Anderson, 2007). Therefore, it is important to conduct a meta-analysis because meta-analyses allow for a quantitative way to synthesize individual effect sizes of many studies to produce a pooled effect size.

Three previous meta-analyses have been conducted to investigate the relation between attachment style and alliance. Diener et al. (2009) included 12 published studies and found a small, positive effect size of $r = .17$ between ratings of attachment security and alliance ratings. An updated meta-analysis (Diener & Monroe, 2011) found the same effect size with an additional 5 published studies. While the findings are important in that they support a correlation between attachment and alliance, they are limited in their generalizability to clinical settings. First, their meta-analysis only included published studies. Second, the effect was found between ratings of secure attachment and alliance. While this result is valuable, in clinical populations compared to the global population, clients have higher instances of insecure attachment (Bakermans-Kranenburg & van IJzendoorn, 2009; Fortuna & Roisman, 2008; Mickelson, et al., 1997).

The need for a more nuanced view of the relation between insecure attachment and alliance was addressed by Bernecker et al. (2014). Their study encompassed 27 studies, both published and unpublished and found an effect size between attachment avoidance and alliance

as r = -.14 and an effect size between attachment anxiety and alliance as r = -.12, both small-to-moderate effects. Delineating attachment insecurity into the anxiety and avoidance dimensions allowed for an analysis of alliance as it is related to insecure attachment and a comparison between the two dimensions. Utilizing a dimensional model for attachment over a categorical model has gained popularity (Fraley et al., 2015; Fraley & Spieker, 2003; Mikulincer & Shaver, 2007; Ravitz et al., 2010). The use of dimensional measures of attachment in Bernecker et al. (2014) allowed for more nuanced views of a client's attachment style compared to the previous two meta-analyses (Diener et al, 2009; Diener & Monroe, 2011).

However, the literature search for Bernecker et al. (2014) was conducted over ten years ago and their analyses included a variety of alliance and attachment measures, some less reliable than others and some that may have different operationalizations for each construct. As such, an updated meta-analysis should be conducted that incorporates the delineation of insecure attachment and only includes the most reliable, "gold standard" measures of attachment and alliance: the Working Alliance Inventory (WAI; Horvath & Greenberg, 1968) to measure alliance and the Experiences in Close Relationships Scale (ECR; Brennan et al. 1998) to measure attachment, as well as those measures derived explicitly from each (i.e., Working Alliance Inventory-Short Form [WAI-S; Tracey & Kokotovic, 1989]; Experiences in Close Relationships-Revised [ECR-R; Fraley et al., 2000]; Experiences in Close Relationships-Short form [ECR-S; Wei et al., 2007]).

The justification for the inclusion of only the studies who utilize the WAI and ECR is multi-fold. First, the WAI and ECR measure the most basic operationalizations of their respective concepts. The WAI was developed to measure the three core components of Greenson and Bordin's operationalization of alliance (goals, tasks, and bond) as well as a global score. The

development of the ECR utilized the two-dimensional model first found by Ainsworth (Ainsworth et al., 1978). Specifically, Brennan et al. (1998) conducted a factor analysis of previous attachment self-report questionnaires (Adult Attachment Questionnaire, Simpson, 1990; Adult Attachment Scale, Collins & Read, 1990; Attachment Style Questionnaire, Feeney et al., 1994; Relationship Scales Questionnaire, Griffin & Bartholomew, 1994) with the anxiety and avoidance dimension, eliminating redundant items and delineating items along each of the two dimensions. Second, both scales have high reliability and validity as demonstrated over multiple studies. The WAI demonstrates both high test-retest reliability and validity (Horvath & Greenberg, 1968; Martin et al., 2000; Hanson et al., 2002) as does the ECR (Brennan et al., 1998; Sibley et al., 2005; Wei et al., 2007). Both are also noted for their strong psychometric properties (WAI: Elvins & Green, 2008; ECR: Ravitz et al., 2010). Finally, the WAI and ECR are the most widely used instruments in literature. Of the studies included in the Bernecker et al. (2014) meta-analysis, all but three utilized the WAI to measure alliance and the majority most used the ECR to measure adult attachment style.

Therefore, the present thesis will address the issue of use of less reliable measures while still delineating insecure attachment across two dimensions for more theoretical and clinical nuance as well as updating the included literature since Bernecker et al. (2014). There are two hypotheses investigated in this meta-analysis. The first is that higher levels of attachment anxiety will be associated with lower ratings of alliance. We expect attachment anxiety disrupts the ability for the client and therapist to work together to develop goals and tasks for therapy as a client with attachment anxiety will not argue or disagree with the therapist's suggestions. Also, attachment anxiety may be detrimental to forming the bond between client and therapist due to negative, attachment-based internal working models of others. The second is that higher levels of

attachment avoidance will be associated with lower ratings of alliance. We expect this because attachment avoidance results in a detached client who is unable to work collaboratively with the therapist to set goals and tasks for therapy, nor is able to form an interpersonal emotional bond with the therapist.

Chapter 2

Methods

Selection of Studies

A literature search was conducted on July 29th, 2021, via the PsycINFO and Dissertation Abstracts databases using the search terms (attachment OR ‘‘relationship style’’ OR ‘‘interpersonal style’’) AND (alliance OR ‘‘therapeutic relationship’’ OR ‘‘client-therapist relationship’’ OR ‘‘therapist-client relationship’’ OR ‘‘patient-therapist relationship’’ OR ‘‘therapist-patient relationship’’ OR “helping alliance”). This literature search encompassed articles published between June 8th, 2012, and July 29th, 2021. Furthermore, we reviewed the 27 studies included in Bernecker et al. (2014) and extracted codes for 10 studies that met our inclusion criteria. Together, the articles coded by Bernecker et al. (2014) and the articles coded by our study encompassed articles published from 1995 to 2018.

The literature search yielded 792 abstracts to be reviewed. The resultant abstracts were read and reviewed by a team of five independent coders including the author of the current thesis. To be included in the analysis, studies were required to meet the following criteria: (a) the study involved individual adult therapy, (b) the study used the client-rated version of the ECR or its direct derivatives (ECR-R, ECR-S, ECR-12), and (c) the study used the client-rated version of the WAI or its direct derivatives (WAI-S). Conditions (b) and (c) were unique from those of Bernecker et al. (2014) who allowed for other less reliable measures of attachment. This resulted in the need to exclude studies that were previously included in the Bernecker et al. (2014) meta-analysis. As discussed in chapter 1, the ECR and WAI were chosen as they are the “gold standard” measures for attachment and alliance respectively. Client ratings were used because

client ratings are better predictors of therapeutic outcome compared to therapists' ratings (Horvath & Symonds, 1991). Three studies were published in non-English language. Google Translate was utilized to translate the article from its original language into English.

Fleiss' kappa (Fleiss, 1971) was calculated to determine if there was adequate agreement between coders. Thirty percent of the 792 abstracts were randomly chosen to be coded for reliability by all five coders. The Fleiss' kappa showed that there was substantial agreement (as determined by Landis & Koch (1977)) between the coders, $\kappa = .68$, 95% *CI* [.63, .72], $p < .005$. In total, 64 abstracts were chosen to be read in full.

The next phase involved reading the full text of the 64 included abstracts and coding the included articles for specific study characteristics. Each article was read and, if determined to be eligible for inclusion, coded by teams of two coders and myself. Each team coded half of the articles and the first author coded all of them. Coders submitted their preliminary data and then met to discuss any disagreements and to establish consensus. This process resulted in five articles. Each of the articles were coded based on publication year, *N*, the specific attachment and alliance measure used, percentage of clients who identified as women, percentage of clients who were white, mean age and well as the age range of participants, and percentage of therapists who identified as women. Finally, we extracted the codes from relevant articles in Bernecker et al. (2014). This resulted in a total of 14 studies to be included in the meta-analysis.

Effect Size Correlation and Combination

All effect sizes were reported as Pearson's product-movement coefficients (*r*). One study reported correlations at multiple points throughout the therapy (Mallinckrodt, 2015). Effect sizes

were aggregated by weighing each coefficient by the number of participants included at each stage. Following Hunter & Schmidt (2004), effect sizes were then corrected for measurement error using test-retest reliabilities reported in previous research (ECR-R: Sibley et al., 2005; ECR-S: Wei et al., 2007; WAI-S Paap & Dijkstra, 2017). Random-effects models were used to combine effect sizes. Random-effects models are the preferred model for meta-analyses (Diener et al., 2009) as they consider the innate heterogeneity between studies.

Meta-Regression

To test for potential moderators, multiple meta-regressions were conducted. This analysis allowed for the investigation of single moderators as well as interactions between potential moderators. Due to the small number of studies, only certain study characteristics could be considered. The tested variables included publication year, mean age of participants, percentage of clients who identified as women, percentage of subjects who identified as White, and percentage of therapists who identified as women.

Publication Bias

To test for publication bias, funnel plots were generated. The Duval & Tweedie Trim and Fill Method was also conducted (Duval & Tweedie, 2000).

Chapter 3

Results

Sample Characteristics

Figure 1 depicts the process of the literature selection for this analysis based on the PRIMSA guidelines (Page et al., 2021). Fourteen studies were included in the final analysis, as summarized in Table 1, with publication dates ranging from 1995 to 2018. There was a total of 1,127 participants. The mean number of participants for a study was 75.13 participants (range 29-278 participants). The mean age of participants across all studies was 32.37 years old (range of mean age 2–.0 - 45.2, range of all ages–17 - 74). Across all included studies, the mean percentage of clients who were women was 70% (range 50% - 100%). The average percentage of White participants was 79% (range 47% - 100%). Data on other ethnicities was not widely reported. The average percentage of therapists that were women was 82% (range 75% - 90%).

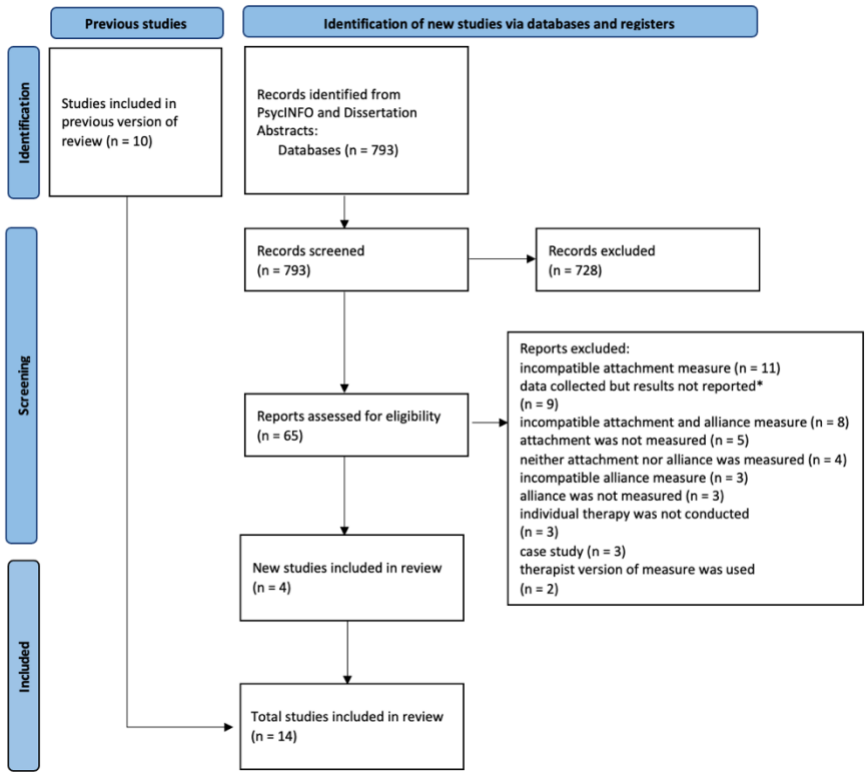

Figure 1. *Flow of studies*

Effect Sizes

Corrected effect sizes of included studies are summarized in Table 1. The pooled effect size between attachment anxiety and alliance was r = -.19, 95% *CI* [-.28, -.11], $p < .0001$. The pooled effect size between avoidance attachment and alliance was r = -.16, 95% *CI* [-.23, -.09], $p < .0001$. The findings support a small but significant negative relation between both anxious and avoidant dimensions of attachment style and alliance ratings. In other words, clients who are more insecure in their attachment style, on either the anxiety or avoidance dimension, tend to have worse alliances with their therapist.

Table 1. *A Summary of Included Studies*

Study	*N*	Attachment measure	Alliance measure	Publication status	ES	
					Avoidance	Anxiety
Brummett (2007)	99	ECR-R	WAI-S	U	-0.21	-0.09
Coljin et al. (2014)	60	ECR	WAI	P	0.04	0.1
Frehling (2005)	29	ECR	WAI	U	-0.02	0.12
Lafrenaye-Dugas et al. (2018)	278	ECR-S	WAI	P	-0.13	-0.31
Majors (2009)	47	ECR	WAI-S	U	-0.33	-0.17
Mallinckrodt et al. (2005)	38	ECR	WAI	P	-0.24	-0.33
Mallinckrodt et al. (2015)	70	ECR	WAI	P	-0.13	-0.27
Marmarosh et al. (2009)	31	ECR-S	WAI-S	P	-0.32	-0.11
Porter (2002)	37	ECR	WAI	U	-0.34	-0.26
Romano et al. (2008)	67	ECR	WAI	P	-0.22	-0.27
Sauer et al. (2010)	95	ECR	WAI	P	0	-0.26
Schiff & Levit (2010)	87	ECR	WAI-S	P	-0.23	-0.06
Smith et al. (2012)	58	ECR	WAI	P	0.01	0.06
Taylor et al. (2014)	58	ECR-S	WAI	P	-0.30	-0.23

Note. ECR = Experiences in Close relationships (Brennan et al., 1998); ECR-R = Experiences in Close Relationships-Revised (Fraley, Waller, & Brennan, 2000); ECR-S = Experiences in Close Relationships-Short form (Wei et al., 2007); ES = effect size; P = published; U = unpublished; WAI = Working Alliance Inventory (Horvath & Greenberg, 1986); WAI-S = Working Alliance Inventory-Short Form (Tracey & Kokotovic, 1989); WAI-SR = Working Alliance Inventory - Short Form Revised (Hatcher & Gillaspy, 2006).

Publication Bias

The Funnel Plots for both analyses were largely symmetrical, suggesting no publication bias. However, due to the lack of perfect symmetry, the Duval & Tweedie Trim and Fill Method were utilized (Duval & Tweedie, 2000). The Trim and Fill method trimmed two studies each from both analyses (different studies from the anxiety analysis and avoidance analysis). The

resulting effect sizes using the filled studies were not significantly different than the original effect size, supporting the lack of publication bias.

Moderators

The tested moderators included publication year, mean age of participants, percentage of clients who identified as women, percentage of subjects who identified as White, and percentage of therapists who identified as women. No significant moderators emerged.

Chapter 4

Discussion

The goal of this meta-analysis was to investigate the relation between adult attachment style and the therapeutic alliance. This meta-analysis was conducted as an update to the Bernecker et al. (2014) meta-analysis whose literature search was conducted almost ten years prior. Fourteen studies were included in the final analysis and analyses were run independently for both dimensions of insecure attachment: attachment anxiety and attachment avoidance. Two hypotheses were tested; the first that higher levels of attachment anxiety would be associated with lower ratings of alliance and the second that higher levels of attachment avoidance would also be associated with lower ratings of alliance.

Both hypotheses were supported in our findings. We found negative and weak relation between attachment anxiety and alliance. We also found negative and weak relation between attachment avoidance and alliance. Both of these findings were statistically significant. These findings support that both dimensions of insecure attachment are negatively correlated with working alliance meaning the worse a client's attachment along both dimensions of insecure attachment, the lower they will report their alliance with their therapist. These findings are consistent with past meta-analyses investigating this topic (Bernecker et al., 2014; Diener et al., 2009; Diener & Monroe, 2011) as both attachment anxiety and attachment avoidance had small but significant negative correlations with the therapeutic alliance as found previously. While publication year, mean age of participants, percentage of clients who identify as women, percentage of clients who identify as white, and percentage of therapists who identified as women were tested as potential moderators, no significant moderators emerged in the analysis. There was no evidence of publication bias.

The correlation between attachment and alliance is important because it supports the theoretical basis for attachment schemas to influence alliance as suggested by Clarkin and Levy (2003). Since the analysis was conducted using correlational effect sizes, no causal relation can be determined. However, within the framework of attachment theory, one can conceive of potential pathways that underscore this relation. One conceptualization of the relation between attachment and alliance is that insecure attachment may impede the formation of a strong alliance during the onset of therapy due to the attachment-based internal working models of the client impairing new interpersonal relationships. Clients with attachment insecurity along both dimensions carry their attachment-based internal working models characterized by abandonment and mistrust into the therapy room. These internal working models are then projected onto the therapist, which, in the case of clients with insecure attachment style, may make it more difficult for them to agree on goals and tasks and also to form a strong bond with the therapist. In this way, the client's attachment style produces a roadblock to the formation of a strong therapeutic alliance, consistent with the findings of this analysis.

Conversely, since no causal relation can be determined from this study, there could be a causal pathway where the therapeutic alliance facilities a change in attachment style. While not applicable to the findings of this analysis as attachment style ratings were typically done prior to the assessment of alliance with the client and therapist, this is still a potential pathway to be explored. Attachment styles have been found to be stable into adulthood and yet may be still subject to change in the face of significant life events (Farley, 2002; Waters et al., 2000). The therapeutic alliance may provide a secure base (Bowlby, 1988) for the client to further develop their attachment schemas. This development may match the theory outlined by Blatt and Levy (2003) in that both dimensions of attachment insecurity have a less developed phenotype and a

more developed phenotype. Blatt and Levy (2003) also note that the clients who exhibited more developed level of each dimension of attachment insecurity appeared to function more like clients with secure attachment styles. Perhaps the secure base provided by the therapist can facilitate the development of attachment-based schemas into more mature and nuanced models that then appear more secure on the self-report attachment measures (Levy & Johnson, 2019). While this causal pathway has no bearings on the findings of this analysis as attachment ratings, but it remains a possible pathway that should be investigated.

Furthermore, there are also other unspecified or unmeasured variables that may influence the relation between attachment and alliance. Symptom severity is a commonly cited potential third variable that may affect this relation and clients who have greater attachment insecurity display higher symptom severity (Bakermans-Kranenburg & van IJzendoorn, 2009; Dagan et al., 2018; Leonard et al., 2022). Various other client-factors may moderate the relation between attachment and alliance as well. For example, object relations and other cognitive factors could affect the client's ability to conceptualize and convey their own internal working models of attachment (Høglend et al., 2011). Especially since the measures used to examine the effect size between attachment and alliance are self-report measures, the ability for the client to analyze their own attachment style or the quality of their therapeutic alliance and report it accurately may moderate the overall effect size. For instance, studies have found that observer-rated measures of alliance rather than self-report measures are better predictors for specific client groups, like clients with substance abuse (Cecero et al., 2001; Fenton et al., 2001) or clients with borderline personality disorder (Levy et al., 2011). These studies are consistent with previous research which has found that self-report measures can be biased by personality traits of the individual (de Jonge & Slaets, 2005) and may portray clients as healthier than they appear (Shedler et al.,

1993). This could be a concern for clients with attachment avoidance that may erroneously report their attachment style as more secure due to their dismissal of their true feelings towards an attachment figure affecting their self-reporting (Levy & Kelly, 2008).

External to the client themselves, the therapist's attachment style may be another possible moderator. Empirically, there is some support for the therapist's attachment style to affect alliance (Bucci et al., 2016; Dinger et al., 2009; Heinonen, 2020), although somestudies have shown no support for therapist's attachment to affect alliance (Ligiero & Gelso, 2002; Ruiz-Aranda et al., 2021). These investigations into the therapist's attachment style as a potential moderator are relatively new but provide an interesting look into the therapy room outside of the client. Overall, more research should be conducted to investigate potential moderators of the relation between attachment and alliance. Similar to the research questions raised by the small-to-moderate effect size between alliance and outcome, investigating third variables that could affect this relation will inform us on the mechanism of the relation between attachment insecurity and alliance.

Clinically, these findings support the importance of attachment style on the therapeutic process. While there are a variety of therapeutic interventions based specifically in attachment theory (see Levy & Johnson, 2019), clinicians can address attachment insecurity in all therapeutic orientations and practices. Indeed, the consistent support for a relation between attachment insecurity, along both dimensions, and alliance ratings imply a need for clinicians to both be aware of and target attachment insecurity in the therapy room. Therefore, it follows that clinicians should be aware of their client's attachment style and the implications for involvement in the therapeutic process, specifically in the development of the therapeutic alliance. For example, a client with attachment anxiety may be hyperaware of any sense of disappointment or

judgement from the therapist. Therefore, the therapist may need to take extra care to be affirming and appear engaged and interested in the client (Levy et al., 2010). Clients with attachment avoidance may become confused and agitated when faced with emotional topics (Dozier et al., 2001). In a similar manner to treating those with attachment anxiety, the clinician must modify their approach to discussing these issues as to not cause the client to shut down.

There are several important limitations to note. First, both of the measures used were client self-report measures. While client self-report measures are commonly used in research and in clinical settings, they may introduce confounds into the relation between attachment and alliance. As discussed above, some client groups have less reliable self-reported alliance ratings (Cecero et al., 2001; Levy et al., 2011; Fenton et al., 2001). These may be self-report measures but since this meta-analysis excluded studies that were not the "gold standard" measures for attachment and alliance, the best measures out there. Second, the samples of the included articles were predominantly white women, and the majority occurred in University settings. These samples are not reflective of the general population but may be reflective of the population of those seeking therapy (Terlizzi & Zablotsky, 2020). Third, as noted above, the effect sizes utilized in these analyses are correlations. Therefore, no conclusion can be made about the causation of the relation. Fourth, the included articles were found using databases, potentially missing articles that are not part of these databases or articles that found null results and unpublished, relegated to the "file drawer" (Rosenthal, 1979). However, our tests for publication bias through the use of the Duval & Tweedie Trim and Fill Method (Duval & Tweedie, 2000) supported our conclusion that there was no publication bias present. Fifth, only presented demographic and client-specific information published in the included studies could be used to run moderator analyses. Therefore, moderator analyses on topics of interest, such as therapist's

attachment style, symptom severity, and therapist orientation could not be conducted. While this is a limitation of the present study, it provides insight into future research.

Despite the limitations noted above, these findings have important implications for attachment theory and clinical practice. Our findings suggest attachment style is an important consideration for the formation of alliance. Therefore, it is important that therapist should be aware of their client's attachment style and how that may affect the therapy session and process and adjust their practice accordingly. Future directions for research should focus on potential moderators to the attachment-alliance relation including symptom severity, the measures used to assess attachment and alliance, and the therapist's attachment effect on alliance.

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*Denotes studies included in the meta-analysis.

ACADEMIC VITA

Rachel Blansfield

EDUCATION

Aug. 2019- Dec. 2022 **The Pennsylvania State University,** University Park, Pennsylvania

Schreyer Honors College

Psychology (Neuroscience Option) - Bachelor of Science

RESEARCH

January 2022 – May 2023

Independent Research Project

Attitudes and Behaviors Towards Condom Use in College-Aged Populations

Pennsylvania State University, Faulty Advisor: Alicia Drais Parrillo, Ph.D

August 2019 – December 2021

Laboratory of Personality, Psychopathology, and Psychotherapy Research

Pennsylvania State University, Principal Investigator: Kenneth N. Levy, Ph.D.

Data/Informatics Coordinator – October 2019 – August 2021

Participant Scheduler – December 2020 – December 2021

Lab Manager January 2021 – December 2021

CONFERENCE PRESENTATIONS

Psi Chi Undergraduate Research Conference April 15th, 2021

Undergraduate Research Exhibition April 6-8th, 2022

Won: Third place, Penn State Library Information Literacy Award

Psi Chi Undergraduate Research Conference April 21st, 2022

Won: First place, Empirical Research Category

Annual Meeting of the Society for Psychotherapy Research July 6th -9th 2022

The Society for Personality and Social Psychology Annual Conference Feb. 23rd - 25th 2023

WORK EXPERIENCE

August 2020 – December 2022

Chemistry Teaching Assistant *Chem 110B, Chem 112B, and Chem 130*

January 2020- August 2020

Chemistry 130 Learning Assistant

April 2016- August 2020

Bason's Coffee Roasting

CLINICAL WORK EXPERIENCE

October 2021 – December 2021

Clinical Interviewer

Pennsylvania State University, Psychology Department

ORGANIZATIONS/CLUBS

October 2020 – May 2023

Students for the Exploration and Development of Space (SEDS) at Penn State

Outreach and Social Media Chair

August 2019- January 2021

Oriana Singers

HONORS AND AWARDS

2020 **The President's Freshman Award**

2021 **Erikson Discovery Grant**

2022 **Evan Pugh Scholar Senior Award**

2022 **McCourtney Professor of Child Studies Scholarship**

2022 **College of Liberal Arts Student Marshal**