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PERSONALITY TRAITS AND THE WORKING ALLIANCE IN PSYCHOTHERAPY TRAINEES: AN ORGANIZING ROLE FOR THE FIVE FACTOR MODEL?

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Abstract

Ackerman and Hilsenroth (2001, 2003) suggested that therapist personality may be meaningfully associated with the psychotherapy working alliance. We extended this line of research by examining the association between Five Factor Model (Costa & McCrae, 1997b) personality traits Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness, and ratings of the working alliance made by clients and psychotherapy trainees. Higher trainee Neuroticism was associated with better client ratings of the alliance, but with worse trainee ratings of the alliance. Higher trainee Openness was associated with lower client ratings of the alliance, and higher trainee Agreeableness with lower trainee ratings of the alliance. Because levels of Neuroticism were low and levels of Openness high among therapist trainees, the results suggest that average rather than low Neuroticism, and average rather than high Openness facilitate better client perceptions of the alliance. Implications are discussed in terms of monitoring and training therapists who evidence these dispositions, in order to assist them in developing maximally effective alliances with clients.

While randomized controlled trials investigating the effectiveness or efficacy of manualized therapies have garnered considerable attention in the research literature, common factors remain important both in the context of research trials and in the everyday practice of psychotherapy (Wampold, 2001). Nontrivial portions of outcome variance across different types of treatment are attributable to the working alliance (Horvath & Greenberg, 1989; Horvath & Symonds, 1991; Kokotovic & Tracey, 1990; Martin, Garske, & Davis, 2000; Parish & Eagle, 2003; Wampold 2001; Crits-Christoph, Connolly Gibbons, & Hearon, 2006).

The alliance encapsulates (1) the agreement between trainee and client on the therapeutic goals, (2) the agreement between trainee and client on the tasks or activities in therapy, and (3) the development of a personal bond between trainee and client (Bordin, 1979). In a review of the current state of knowledge about the alliance, Castonguay, Constantino, & Holtforth (2006) offered several recommendations for future research, one of which concerned initiatives aimed at understanding the development of the alliance, particularly

among therapist trainees. Enduring dispositions, or personality characteristics, represent one important source of individual differences with implications for trainee ability to foster successful alliances.

THERAPIST PERSONALITY CHARACTERISTICS AND THE ALLIANCE

Therapists' personal dispositions appear to influence the alliance for both good and ill. In two important reviews, Ackerman and Hilsenroth distilled the results of 25 studies identifying therapist characteristics associated with a good alliance (Ackerman & Hilsenroth, 2003), and 14 studies identifying therapist characteristics associated with a poor alliance (Ackerman & Hilsenroth, 2001). They concluded that trainee flexibility, honesty, respectfulness, trustworthiness, confidence, interest, alertness, friendliness, warmth, and openness are all associated with a better alliance (2003), and that rigidity, uncertainty, exploitiveness, criticalness, distance, tenseness, aloofness, and distractedness are associated with a worse alliance (2001). They also noted that experience is associated with better alliance ratings. Unlike the other characteristics reviewed, this is not a dispositional variable, but instead is a function of the time one has conducted psychotherapy.

The finding that various therapist traits seem relevant to the process of psychotherapy suggests that the Five Factor Model of personality (McCrae & Costa, 1997b; McCrae & Costa, 1999; John & Srivastava, 1999) may provide a useful organizing context for alliance studies involving therapist personality. The Five Factor Model is a comprehensive taxonomy derived from factor analyses of personality test data (McCrae & Costa, 1997a) and natural language trait adjectives (Goldberg, 1990) that groups traits into five broad domains: Neuroticism, or the tendency to experience negative affects, such as depression, anxiety, and anger, as well as affective instability; Extraversion, which involves gregariousness, sociability, energy and activity, alertness, and positive affects such as joy, excitement, and happiness; Openness to Experience, a dimension tapping intellect and interests in novel experiences, ideas, people, and activities; Agreeableness, encompassing interpersonal warmth, trust, altruism, and friendliness; and Conscientiousness, which consists of self-discipline, reliability, achievement striving, and organization. The Five Factor Model can coherently organize research on therapist personality by encouraging focus on the most fundamental, or basic dimensions of individual variation.

RELEVANCE OF FIVE FACTOR MODEL TRAITS FOR THE ALLIANCE IN TRAINEES

Understanding trait-alliance relationships may be particularly relevant for individuals in training. Fostering a successful alliance is a learned skill (Crits-Christoph, Connolly Gibbons, Crits-Christoph, Narducci, Schamberger, & Gallop, 2006; Hilsenroth, 2006), suggesting that in trainees with less experience (and less crystallized theoretical orientations; Stoltenberg, McNeil, & Delworth, 1998), alliance formation may be influenced by dispositional characteristics. In other words, although therapist personality may show associations with the alliance at any point in professional development, such links may be particularly salient before effective alliance skills have been mastered.

Knowledge of how trainee personality characteristics affect the alliance may be useful to supervisors and educators. Trainees whose dispositions suggest difficulty in alliance formation may benefit from focus on this skill in supervision, while for those dispositionally apt to form effective alliances, supervision efforts may be dedicated to other areas in greater need of work. Supervised experience and practice in alliance-fostering techniques appear to have a positive effect on the alliance (Crits-Christoph et al., 2006; Hilsenroth, 2006). Taken together, these considerations suggest that a greater understanding of FFM personality traits

associated with the alliance can both extend existing understandings of alliance-relevant therapist characteristics to trainees, and provide potentially useful knowledge to those involved in trainee supervision.

HYPOTHESIZED ASSOCIATIONS BETWEEN TRAINEE TRAITS AND ALLIANCE

Other studies (see Hofstee, DeBaad, & Goldberg, 1992) suggest associations between the characteristics identified by Ackerman and Hilsenroth (2001, 2003) and Five Factor Model domains, providing a basis for hypotheses about how Five Factor Model traits might be associated with the alliance in trainees. We investigated both trainee perceptions of the alliance, as well as client perceptions. Based on Ackerman and Hilsenroth's conclusion that therapist tenseness is related to lower alliance, we hypothesized (1) that higher trainee Neuroticism would be related to lower client and trainee ratings of the working alliance. As friendliness, confidence, and warmth are reportedly associated with a better alliance, we hypothesized (2) that higher Extraversion would be associated with better trainees and client ratings of the alliance. We also hypothesized that higher (3) Openness (reflected in previous findings for therapist openness and low rigidity), (4) Agreeableness (based on findings for honesty, respectfulness, trustworthiness, and low criticalness) and (5) Conscientiousness (based on findings for trustworthiness) would each be associated with better trainee and client ratings of the working alliance. Although trainee experience was limited in our sample, we nevertheless controlled for it.

Finally, one additional issue is that the FFM domains are general and broad, each encompassing many specific but related traits. In order to enhance the clinical value and specificity of findings, we conducted a set of follow-up exploratory analyses that would isolate the specific component(s) of each broad FFM domain affecting the alliance. The advantage of this strategy is that it aids interpretation to know whether a trait effect is due to specific aspects of that trait. So, for example, if higher Conscientiousness was associated with better alliance ratings, we examined whether specific aspects such as achievement striving, order/neatness, or dependability largely accounted for that relationship.

METHOD

PARTICIPANTS AND PROCEDURE

Data were collected from three different mental health training clinics. The first two locations consisted of two Western Michigan University (WMU) community mental health clinics, located in Kalamazoo and Grand Rapids, Michigan. Clients within the Kalamazoo clinic consisted primarily of community referrals and WMU students, while the client base for the Grand Rapids clinic consisted primarily of community referrals and court mandated individuals. The third location for data collection was the Counseling, Health, and Testing Center of the University of Missouri-Kansas City (UMKC), an urban commuter university in Kansas City, Missouri. Clients at this agency consisted of traditional and nontraditional-aged college students, (many of whom were part-time and/or first-generation students), graduate, medical, law, and other professional program students, as well as university faculty and staff.

Thirty-four trainees participated. One did not provide information on years of experience, leaving 33 trainees with available data for the present analysis. Trainee demographics are depicted in Table 1. Nine therapists were in counseling psychology Ph.D. programs, seven in community counseling or mental health counseling Masters' programs, five in a school counseling Masters' program, six in a counseling psychology Masters' program, two in a marriage and family therapy Masters' program, two in a counselor education Ph.D. program,

and one in a masters level student affairs program which included a college counseling track. One did not identify a program of study.

Trainee therapists at these sites completed the NEO-Five Factor Inventory (NEO-FFI; Costa & McCrae, 1992), a measure of PPM traits (described below). Participating therapists were also asked to have as many clients as possible complete the Working Alliance Inventory, Short Form (WAI-S; Busseri & Tyler, 2003, described below) at any point between the third and seventh session. Trainees also completed a trainee version of the WAI-S at the same time. This time frame is consistent with that used in prior research (Dunkle & Friedlander, 1996; Ligiero, & Gelso, 2002; Satterfield & Lyddon, 1995), and was selected in order to allow a sufficient number of sessions for an alliance to develop, but to restrict measurement to the early or early-middle phase of therapy when tasks, goals, and therapeutic bond may still be crystallizing. A practical advantage of this “window” was that it allowed some flexibility in the real-world flow of trainee’s caseload: when the study was initiated, some therapists’ clients may not have been eligible because they had only been seen for one or two sessions, but they would soon become eligible upon the third session. In other cases, clients who had already been seen for three to six sessions already were likely to be eligible for a shorter period of time. Permitting a slight range during which therapist-client dyads were eligible therefore provided a compromise between the prohibitive difficulty of assessing the alliance at the exact same session for everyone, and achieving a relative degree of standardization of the period during which the alliance was measured. On average, therapists and clients completed the measures in the fourth session. $M(SD) = 4.4 (1.6)$.

Sixty-two clients of trainees in the present analysis returned completed forms. The number of clients seen by each trainee ranged from 1 to 13, with about 38% of the therapists returning data for multiple clients. The client demographics are reported in Table 1.

INSTRUMENTS

WAI-S—The Working Alliance Inventory—Short (WAI-S) was derived through factor analysis of the full length version, to which it is quite similar (Busseri & Tyler, 2003; Martin et al., 2000; Tracey & Kokotovic, 1989). The total score for the WAI-S ranges from 12 (low working alliance) to 84 (high working alliance). The WAI-S assesses one general scale (General Alliance or Total) and 3 subscales. The three subscales include the Tasks performed in therapy (i.e., the extent to which a trainee and client agree on what is occurring during the counseling process; e.g., the interventions used); the therapeutic Bond (i.e., the extent to which a trainee and client possess a bond or therapeutic relationship); and the Goals sought out for therapy (i.e., the extent to which a trainee and client agree on the goals or outcome of the therapy). The psychometric distinctiveness of these three subscales is in doubt (Horvath & Greenberg, 1989; Mallinckrodt & Nelson, 1991; Tracey & Kokotovic, 1989), and in the present sample they were highly correlated. Therefore, only the WAI-S total score was used in analyses. In a reliability generalization study, Hanson, Curry, & Bandalos (2002) found that the total score for the client version of the WAI-S had an average reliability of .97 across several studies, and in the present sample it was also quite high (.91 in clients, .93 in therapists). Both trainee and alliance ratings were standardized (i.e., converted to Z-scores, with a mean of 0, SD of 1) to facilitate interpretation.

NEO-FFI—The NEO Five Factor Inventory (NEO-FFI) is a short form of the full length NEO-Personality Inventory, Revised (NEOPI R; Costa & McCrae, 1992). It contains 60 items, each with a corresponding 0-4 (strongly disagree-strongly agree) Likert scale. It measures Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness, each with 12 items, and has extensive evidence of validity and reliability (e.g., Caruso, 2000). Cronbach alpha estimates of internal consistency in the present sample were .75 for

Neuroticism and Conscientiousness, .76 for Openness, and .79 for Extraversion and Agreeableness.

Each of the Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness domains can be broken down into item cluster subcomponents measuring narrow, interrelated personality traits (Saucier, 1998): Neuroticism may be decomposed into Depression, Anxiety (or alternatively, general Negative Affect) and SelfReproach; Extraversion into Sociability, Positive Affect, and Goal Striving; Openness into Aesthetic Interests, Intellectual Interests, and Unconventionality; Agreeableness into Prosocial Orientation and Nonantagonistic Orientation; and Conscientiousness into GoalStriving, Orderliness, and Dependability. These subcomponents permit a more fine-grained depiction of personality. Chapman (2007) cross-validated these subcomponents in two large samples, and offered examples of how they could be used to enhance the specificity of results based on the broad NEO-FFI domain scores. In the current sample, subcomponents of the same domain exhibited the expected moderate intercorrelations: .54 among the Neuroticism components, .38-.56 among the Extraversion components, .45-.51 among the Openness components, .56 among the Agreeableness components, .35-.45 among the Conscientiousness components. These components were Z-scored (i.e., mean 0, standard deviation 1) to enhance interpretability.

Trainee scores for Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness were transformed into *T*-scores ($M = 50$, $SD = 10$) based on adult NEO-FFI norms (Costa & McCrae, 1992) in order to place personality scores on meaningful metric (i.e., Very Low 25 – 34; Low 35 – 44; Average 45 – 55; High 56 – 65; to Very High 66 – 75). To facilitate interpretation of regression analysis coefficients, which reflect the change in the DV associated with a 1 unit change in the predictor, personality *T*-scores were scaled by the national standard deviation (10). Thus, a 1 unit change in scaled scores corresponds to a 10 *T*-score point increase, or a meaningful difference in trait levels.

STATISTICAL ANALYSES—Several therapists returned data for multiple clients, resulting in nonindependent observations (i.e., clients nested within therapists). We considered both multilevel models (MLM), and a semi-parametric technique called Generalized Estimating Equations (GEE; Burton, Gurrin, & Sly, 1998; Hanley, Negassa, Edwardes, & Forrester, 2003; Horton & Lipsitz, 1999) to examine the association of trainee dispositions with therapist and client alliance.

Both MLM and GEE model the main effects of personality traits upon working alliance, accounting for the clustering of clients within therapist. The main effects are reflected in the regression coefficients of the model, and, as in standard regression, indicate the amount of change in the outcome (alliance score) associated with a one unit change in the predictor (personality traits). However, the two techniques differ in how they account for the nonindependence of observations. MLMs estimate a random intercept term representing variation between therapists in mean alliance levels, conditional on other predictors in the model. The inclusion of the random intercept ensures standard errors appropriately accounting for any nonindependence of observations, and hence valid significance tests of model parameters, if model assumptions are met. Among these assumptions are both normally distributed “level 1” residuals—similar to residuals in standard regression—but also normally distributed random intercepts. When these assumptions are violated, the model estimates may no longer be valid. Preliminary analysis revealed that this assumption was indeed violated in the present sample, necessitating the use of GEE, which is a semi-parametric alternative to MLM.

GEE is an iterative technique which first estimates regression coefficients, then calculates the within-therapist correlations of WAI scores (in contrast to between therapist variation in conditional WA scores, as in the random intercept of a MLM). GEE then uses information on within-therapist correlation to re-estimate regression coefficients, correcting for nonindependence. It then examines within-therapist residual correlations again, and again adjusts regression coefficients accordingly, proceeding in an iterative fashion until estimates resulting in no substantial within-therapist correlation are achieved. The standard errors of the regression coefficients are provided by the so-called “sandwich estimator,” which provide correct standard error estimates without distributional assumptions. Sandwich-estimated standard errors are thus unbiased even if residuals are nonnormally distributed or not constant across predicted values of the outcome (heteroskedastic).

For both client and therapist ratings of the alliance, all five personality factors served as independent variables, with trainee experience (coded as in Table 1) as a covariate. Normal distributions with identity links were specified, rendering GEE equivalents of linear regressions. An exchangeable working correlation matrix was specified for all models, and robust standard errors with Wald tests used for all significance tests (Hanley et al., 2003; Horton & Lipsitz, 1999). We tested model specification by assessing the linearity of observed effects in additional models including quadratic terms, and interactions among predictors in additional models including product terms. Finally, because both personality and alliance scores were scaled in standard deviation units, the parameter estimates provide a practical measure of the magnitude of effect—the standard deviation change in alliance ratings associated with a one standard deviation increase in personality traits, or the equivalent of moving from average ($T=50$) to high ($T=60$), or from high ($T=60$) to very high ($T=70$) on a trait. All models were fit Stata 10, Special Edition.

RESULTS

We first examined the distribution of trainee personality traits. Figure 1 shows that in the trainee sample, lower levels of Neuroticism were under-represented, while higher levels of the remaining traits were over-represented. As seen in Table 1, mean levels of Neuroticism were approximately .5 SD below those of the general population (T -score of 45 versus 50), while mean Openness, Extraversion, Agreeableness, and Conscientiousness were approximately .8, .6, .4, and .4 standard deviations above norms.

Table 2 presents regression coefficients, standard errors, and p values for personality factors significantly associated with each outcome. The table also includes a column for “effect size,” or the standard deviation change in alliance ratings associated with a one standard deviation increase in personality traits. Clients rated the working alliance higher for trainees with higher Neuroticism. At the same time, trainees higher in Neuroticism rated the alliance lower than trainees lower in neuroticism. Clients rated the alliance higher in trainees with lower Openness compared to trainees higher in openness. Trainees higher in Agreeableness rated their alliance lower than did trainees lower in Agreeableness. The coefficients reflect the standard deviation change in working alliance associated with a one standard deviation increase in trainee Neuroticism. Model specification tests revealed no nonlinear effects or interactions.

Exploratory subcomponent analyses revealed that clients rated the alliance higher specifically in trainees higher in Negative Affect, $B(SE) = .36 (.11)$, $z = 3.24$, $P = .001$, while the Self-Reproach component of Neuroticism was unassociated with client ratings. However, lower trainee ratings of their own alliance were tied to greater trainee Self-Reproach ($B(SE) = -.37 (.10)$, $z = -3.64$, $P < .001$), rather than trainee negative affect. The Agreeableness association with trainee ratings of the alliance was due to the tendency for

trainers higher in Nonantagonistic Orientation to rate their alliance as lower, $B(SE) = -.33 (.07)$, $z = -4.29$, $P < .001$, and unassociated with trainee levels of Prosocial Orientation. No individual subcomponent of Openness reached significance at $p < .05$, but a trend suggested that clients rated the alliance lower in therapists who were higher on the Intellectual Interests component of Openness, $B(SE) = -.20 (.12)$, $z = -1.65$, $P = .10$, while the Aesthetic Interests or Unconventionality aspects of Openness were unassociated. Again, coefficients reflect the standard deviation change in alliance ratings associated with a one standard deviation increase in each trait.

Trainee experience was not significantly related to either trainee or client perceptions of the alliance. We examined the association of trainee and client ratings of the alliance in a GEE model with standardized scores on both variables. This produced a standardized regression coefficient roughly equivalent to a Pearson correlation, adjusted for nesting of clients within therapists. The two sets of ratings were not associated in this sample ($r = -.01$, $P = .88$).

DISCUSSION

When trainee personality is considered from the perspective of the Five Factor Model, three domains appear related to the alliance in psychotherapy: Neuroticism, Openness, and Agreeableness. However, the direction of the associations was different than expected. Indeed, the current results defy a simple perspective in which certain socially desirable traits are viewed as inexorably tied to a better or worse therapeutic relationship.

TRAINEE PERSONALITY PREDICTORS OF CLIENT ALLIANCE RATINGS

Clients tended to rate the alliance higher for therapists who scored higher in Neuroticism. Although contrary to initial hypotheses, this interesting result may be partially explained by the relatively low levels of Neuroticism in the sample. As can be seen in Table 1 (and Figure 1), the mean level of Neuroticism among the therapists was low by national norms (average T -score of 44, or more than half a standard deviation below average). In other words, low Neuroticism in our sample of therapists translated into very low levels of Neuroticism in the general population, while high Neuroticism among these trainee therapists ranged into slightly above average levels, according to national norms. Thus, rather than suggesting that “high” trainee Neuroticism is good for client ratings of the alliance, results might more accurately be interpreted as indicating that normal or slightly above average levels are better than low levels. The magnitude of this effect was not trivial, as an increase of one standard deviation in Neuroticism was associated with a .43 SD increase in client ratings of the working alliance.

Why might low levels of trainee Neuroticism, compared to average levels, impede the alliance from the client’s perspective? Subcomponent analyses suggested that the effect was primarily attributable to the Negative Affect element of Neuroticism—or the tendency to experience sadness and anxiety. Normal or slightly heightened levels of sadness or anxious affect may permit therapists to empathize better with distressed clients. Low levels of aversive emotions among therapists may translate into discomfort with, or a tendency to miss negative affect in clients. This could deter therapists from appropriately exploring such emotions, which is an in-session tactic identified by Ackerman and Hilsenroth (2003) as positively contributing to the alliance. Sauer, Lopez, & Gormley (2003) also reported that therapist attachment anxiety was positively associated with client-rated working alliance early in therapy. Their interpretation was that focusing on the alliance early on in therapy was a tool helpful for alleviating negative affect among therapists prone to anxiety.

Whereas levels of trainee Neuroticism were low-average in this sample, the average level of Openness was high. This is likely in part a function of the higher education of the graduate-

student therapists, and in part the result of a vocational selection process in which helping careers attract people higher in Openness. Nevertheless, high Openness in our sample corresponded to very high levels of this trait in the general population. Our results therefore indicate that average levels of trainee Openness are associated with better client-rated alliance than extremely high levels. Individuals extremely high in Openness are likely to be eccentric, bohemian, highly intelligent, and may hold radical or unconventional attitudes (McCrae & Costa, 1997a). Such attributes could conceivably intimidate or perplex clients who are not high on Openness themselves. A trend suggested that the narrow Openness dimension of Intellectual Interests might be largely responsible for the Openness effect. One possibility is that highly intellectual therapists may avoid the sort of affective exploration that Ackerman and Hilsenroth (2003) identified as facilitative of the alliance. However, as no subcomponent of Openness reached conventional levels of statistical significance, it is difficult to speculate on the precise mechanism. Another caveat is that the Openness effect size was also small, suggesting that a trainee with an Openness *T*-score of 60 (high) would have client ratings of the alliance only .12 SD lower than a trainee with an Openness *T*-score of 70 (very high). Our results therefore suggest that Openness bears only minor importance in alliance associations.

TRAINEE PERSONALITY PREDICTORS OF TRAINEE RATINGS OF THE ALLIANCE

A different pattern of findings emerged for trainees' own perception of the alliance. Trainees scoring higher in the Neuroticism component Self-Reproach rated their own alliance lower. As this subcomponent taps the tendency to criticize or attack oneself (Chapman, 2007), it is not surprising that such therapists may evaluate their own relationships with clients in a more negative way. Because the sample of trainees reported somewhat below average levels of Neuroticism, the result essentially indicates that trainees with moderately self-critical tendencies perceive their alliance to be worse than those with low levels. The effect of very high levels of self-criticism on trainee alliance scores remains unknown, however, as our sample lacked sufficient representation of high-Neuroticism trainees.

More Agreeable trainees, and more specifically those scoring higher on the component Nonantagonistic Orientation, also rated their own working alliance lower. In our sample, individuals with above average levels of Agreeableness were heavily represented, and the effect on therapist ratings of the alliance was not large. The Nonantagonistic Orientation component taps a lack of belligerence and Machiavellianism, cooperation, and deference, rather than active warmth and trust, which are captured more by Prosocial Orientation (Chapman, 2007). High scores in Agreeableness also tend to be associated with modesty, deference, and submissiveness (Costa & McCrae, 1992). One possibility then is that trainees who score lower in Nonantagonistic Orientation are more humble and modest in rating their own alliance.

The lack of hypothesized associations for Extraversion and Conscientiousness are somewhat puzzling. One possibility is that these traits are simply less relevant, on the whole, to alliance-relevant characteristics previously identified. For instance, Conscientiousness may be related to careful and up-to-date record-keeping practices among therapists, but its effects on face-to-face aspects of therapy may be less pronounced.

ADDITIONAL CONSIDERATIONS: THERAPIST-CLIENT ALLIANCE AGREEMENT AND PERSONALITY MATCH

Another noteworthy finding was the lack of association between therapist and client ratings of the alliance. Although this was not the main focus of the present study, the degree to which therapists are able to successfully predict client alliance ratings is an important area of research in and of itself, and our findings suggest the need for additional work on factors

associated with better versus worse agreement. One possibility is that psychotherapy trainees have not yet developed the acumen necessary to discern client perceptions of the alliance. However, our finding is consistent with Horvath and Bedi's (2002) suggestion that therapist-client views often diverge, particularly early in therapy—so timing, rather than, or in addition to experience, may account for the discrepancy.

A related issue is that client personality traits are likely to interact with therapist personality traits in alliance formation and maintenance. Client personality (Coleman, 2006a) and therapist client personality match (Coleman, 2006b) are also both significantly associated with alliance ratings. Although we were not able to examine these factors, it seems highly likely, if not inevitable, that both affect alliance formation. Situational demands of each client may elicit different dispositional tendencies from therapists, consistent with perspectives emphasizing the interface between traits, or basic dispositions, and social-cognitive processes, which are driven in part by immediate situational demands (Miscel & Shoda, 1999).

SUMMARY AND CONCLUSIONS

As a whole, these findings suggest two important implications. First, it is not just the specific trainee personality trait in question, but the levels of that trait which are important for the alliance. Second, different traits may influence client versus trainee ratings of the alliance in different ways. The hypotheses we offered were based on relatively simple directional associations of personality traits with the alliance, irrespective of the level (high, middle, low) of the traits under consideration. Our findings appear inconsistent with the literature informing such hypotheses and speak to the need for a more complex conceptualization of the association between therapist personality and alliance. Specifically, rather than a simple linear association, it may be that very high, as well as very low, levels of certain traits such as Neuroticism and Openness impede alliance formation. Although we are unaware of psychotherapy work examining such nonlinear associations, recent work on the clinical impact of physician personality characteristics suggests that very high levels of Conscientiousness may have ill-effects on the physician-patient relationship. Doctors scoring high, rather than average, on Conscientiousness receive lower patient satisfaction ratings (Duberstein, Meldrum, Fiscella, Shields, & Epstein, 2007), and physicians scoring high, rather than average, on a facet of Conscientiousness use communication patterns that involve patients less in explaining diagnoses and in treatment planning (Chapman, Duberstein, Epstein, Fiscella, & Kravitz, in press). Future work should bear such findings in mind.

With respect to supervision and education, trainees who appear deficient, repressing, or bereft of negative affect, or very high in their Openness to Experience, may benefit from closer supervision. Such therapy trainees may be at risk for engaging in tactics which inhibit or impede the development of a therapeutic bond and/or shared goals and tasks with their clients. Supervision efforts might focus on increasing trainee self-awareness and self-monitoring of the way in which these dispositional tendencies manifest themselves in session. Trainees who appear overly self-critical and/or deferential might be encouraged to carefully evaluate their own perceptions of the alliance and cross-check them with clients.

Limitations included a cross-sectional design, so we make no claims about causality. The use of a graduate student sample of therapists limits the generalizability of the present findings to experienced therapists. Additional limitations included the measurement of the alliance at only a single time point in therapy, and lack of information on client characteristics such as personality and psychopathology. We could also not be certain that clients constituted a random sample of therapists' caseloads. We did not investigate variation between sites, though future studies might. Sample size was determined by

practical limitations, limiting power. Strengths included the use of a comprehensive personality taxonomy, measurement of both client and trainee ratings of the working alliance, statistical techniques robust to typical assumptions in multi-level models, and the use of a trainee sample, which allowed for a view of personality-alliance associations during a critical developmental period when alliance skills can be targeted for improvement. In the end, our results constitute one small step toward increased understanding of personality-alliance associations through the use of a rich, descriptive tool from personality psychology. More research in this intriguing area is warranted.

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FIGURE 1. Distribution of Five Factor Model personality traits in trainee sample, compared to population distributions with T-score mean of 50 and standard deviation of 10 (see Costa & McCrae, 1992).

TABLE 1

Trainee and Client Demographics

Variable	<i>M</i> (Median) or <i>N</i>	<i>SD</i> or %	Minimum Maximum
Therapists (<i>n</i> = 33)			
Age	31.3 (28)	8	22–52
Ethnicity:			—
Caucasian	28	85%	
Minority	4	15%	
Gender			—
Male	27	82%	
Female	6	18%	
Years of practicum experience: < 1	15	44%	0–7
1–2	9	26%	
3–5	4	12%	
6+	6	28%	
Neuroticism	44.6 (45)	7.5	31–63
Extraversion	56.9 (58)	9.7	33–75
Openness	58.6 (59)	10.2	38–75
Agreeableness	54.3 (57)	10.2	26–69
Conscientiousness	54.3 (53)	8	40–71
Clients (<i>n</i> = 62)			
Age	28.4	8.3	18–51
Ethnicity:			—
Caucasian	50	82%	
Minority	12	18%	
Gender:			—
Male	23	37%	
Female	39	63%	
Education		13%	—
High school	8		
Some college	39	63%	
Some graduate school	15	24%	

Note. Personality dimensions in *T*-scores (*M* = 50, *SD* = 10) using adult national norms of the NEO-FFI (Costa & McCrae, 1992).

TABLE 2

Associations Between Trainee Personality Traits and Alliance Ratings

	(1) Outcome 1: Client Alliance Ratings Parameter Estimate (Stan- dard Error) Z, P values	(2) Outcome 2: Trainee Alli- ance Ratings Parameter Estimate (Stan- dard Error) Z, P values
Trainee Neuroticism	0.43 (0.17) 2.53, .011	−0.33 (0.14) −2.38, .017
Trainee Extraversion	0.06 (0.24) .24, .807	0.16 (0.14) 1.10, .269
Trainee Openness	−0.18 (0.09) −2.05, .041	0.01 (0.10) .13, .899
Trainee Agreeableness	−0.10 (0.09) −1.11, .268	−0.22 (0.07) −3.21, .001
Trainee Conscientiousness	0.07 (0.16) .41, .685	0.03 (0.12) .28, .783
Trainee Years of Experience	−0.18 (0.12) −1.58, .115	0.13 (0.09) 1.38, .168

Note. Generalized Estimating Equation (GEE) parameter estimates and standard errors. Personality traits scaled in standard deviation units according to national norms (Costa & McCrae, 1992). Alliance ratings scaled in standard deviation units. N = 32 trainees, 62 sets of client and trainee alliance ratings.