

A Preliminary Probe of Personality Predicting Psychotherapy Outcomes: Perspectives from Therapists and Their Clients

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Keywords

Five-Factor Model · Openness · Conscientiousness · Self-report · Clinician · Personality disorder · Treatment outcome · Big Five

Abstract

Background: It is widely established that personality disorder has as broad negative impact on psychotherapy outcomes. Given the increased emphasis on dimensional traits for personality pathology in the DSM-5 and the proposal for the ICD-11, it is important to understand how traits are linked to treatment outcomes. Building on past research with general traits, we hypothesized that more nuanced and specific relations would be apparent. Furthermore, much of the past research has relied upon self-reports of personality and little is known about how ratings from therapists might be related to outcomes. **Sampling and Methods:** The present paper examined how dimensional traits from the Five-Factor Model predicted outcomes in a case series of 54 therapist-client dyads within a doctoral training clinic. Importantly, this extends past research as dimensional traits were rated by both therapists and clients at intake as well as sequentially over the course of therapy. **Results:** Correlations and regression analyses indicated that traits predicted a variety of outcomes including initial engagement in treatment as well as overall symptom reduction across therapy. Specifically, preliminary evidence suggests that therapist-rated conscientiousness at

intake was positively related to clients' early engagement in therapy. In addition, openness to experience after the 4th session – particularly as rated by the client – was predictive of long-term therapy outcomes. **Conclusions:** Broadly, these results provided preliminary information about the promise of dimensional models for improving the clinical utility of personality disorder diagnoses. More specifically, these results reinforced the relevance of personality assessment during therapy and indicated the potential predictive value of ratings by therapists and their clients. © 2018 S. Karger AG, Basel

There has been a broad historical interest in identifying factors that influence the outcomes of psychotherapy [1, 2]. Of course, a major focus of these efforts has been on the treatment modality, such as its philosophy, theory, and practical procedures. However, client variables are another factor that has been shown to be relevant to predicting outcomes [3]. This strategy, for example, seeks to identify why some clients improve more than others when engaged in the same type of therapy, which would ultimately inform efforts to better match certain clients with appropriate therapies [4].

Efforts of this type have identified demographic and personal factors of clients that are associated with positive therapeutic outcomes. Some of these include intelligence, motivation, education, and overall psychosocial func-

tioning level [5]. Relevant to this special issue on functioning in personality disorder (PD) is the fact that PD itself has been linked to poorer outcomes for the treatment of a variety of conditions [e.g., 6, 7]. That is to say that those with a PD diagnosis have worse treatment outcomes than those without.

Nonetheless, such effects have often focused on traditional PD categories and resulted in the global conclusions about the negative impact of PD pathology. Given the wide agreement that traditional PD categories are flawed in important ways [8, 9] and that dimensional alternatives should be preferred as more homogenous constructs [10, 11], an investigation of how dimensional personality traits impact treatment outcomes might yield more specificity.

Several studies have found an association between clients' general personality traits and ultimate psychotherapy outcomes [e.g., 12–14]. For example, Conte et al. [12] examined the degree to which a self-reported personality profile completed prior to the first session within 96 psychiatric outpatients receiving psychodynamic therapy. That study found that higher standings on the personality variable of rejection (of others) were associated with less improvement over therapy. In addition, Levy et al. [15] conducted a meta-analysis of 19 studies and concluded that secure attachment was positively related to better outcomes, while attachment anxiety was linked to worse outcomes.

Over the past decade the field has broadly coalesced around the idea that adult personality traits can be described by five broad domains, which have been labeled the Big Five or Five-Factor Model (FFM). The FFM has been critiqued by some as incomplete [16] and by others as focusing on surface-level description [17], yet it has proven useful for organizing disparate literatures [18], including PD [19]. These domains have been labeled extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. The FFM has been shown to reasonably account for PD [20], and clinicians have indicated ways in which these traits may be relevant to clinical practice [21]. Thus, it is particularly informative to determine how the FFM domains relate to psychotherapy outcomes.

There has been an increasing number of studies investigating links between the FFM and mental health treatment outcomes [22]. One of the first investigations of psychotherapy outcomes and the FFM was by Ogradniczuk et al. [23], who administered the self-report NEO Five-Factor Inventory [24] to a series of 107 psychiatric outpatients within an RCT comparing 2 separate therapies for complicated grief. They examined a variety of

outcome measures (all focused on symptom reduction) and found that higher extraversion, openness, and conscientiousness were linked to positive outcomes, while higher neuroticism was related to negative outcomes. Since that time, there have been a number of studies examining similar questions. Overall, the results have varied somewhat, appearing to depend on the clinical population studied, the treatment modalities, and the outcomes tracked. In general, it appears that higher conscientiousness is associated with positive outcomes such as reduced relapse for substance use [25] and overall symptom improvement. Extraversion typically has also been associated with symptom improvement within depression treatment [26]. Finally, higher levels of neuroticism predict worse outcomes across a variety of conditions, particularly depression [27], while the results for agreeableness and openness have been less robust.

Such research has been informative in suggesting how assessment results and knowledge of the client's FFM personality traits can be helpful in planning treatment [22]. Nonetheless, there are 2 key limitations to the available literature. First, FFM traits have been assessed via self-report questionnaires and, second, this assessment has nearly always occurred at the outset of treatment (i.e., a baseline assessment). Although there is strong reason to support the validity of clients' self-reported personality [28, 29], meta-analytic findings have also revealed a great deal of unshared variance with personality ratings provided by the treating clinician [30]. Clinicians are a particularly informative source of personality information given that they assign nearly all diagnoses in practice settings [31] and are specifically trained to detect and report personality pathology. Thus, examining how self-reported personality traits, as well as those reported by the clinician, can predict psychotherapy outcomes would be particularly informative in extending the literature [32]. A second limitation of the literature is the pattern of assessing personality traits only at the beginning of therapy. Such a strategy complicates the ultimate prediction as the outset of therapy is when clients are often at peak distress, which might cloud their ability to provide maximally accurate self-reports [33]. Therapists' ratings might also be less accurate early in therapy as they have very little information on which to base their ratings. Thus, collecting personality ratings after a few sessions would allow some transient distress to subside, provide more data for therapists, and allow clearer prediction of longer-term treatment outcomes.

The present study addresses these 2 limitations by examining the predictive capacity of FFM traits as rated by the client's self-report as well as ratings by the treating clinician. Importantly, these personality variables were reassessed by both sources after the fourth session of treatment and all 4 sets of ratings were used to predict a series of short-term and long-term psychotherapy outcomes in an outpatient clinic.

Method

The sample is a clinical case series within a community-serving clinic operated by a doctoral training program in clinical psychology from the fall of 2011 through the spring of 2015. The clinic served the community and was aimed at adults primarily but also accepted adolescents who were deemed verbal and functional enough to engage in the sort of one-on-one psychotherapy that is typical for adults. As a training site within a clinical science program there was a focus on evidence-based practice [34]. Clinical services were centered on cognitive-behavioral therapies and clinicians were trained with a background in the skills and therapeutic stance of motivational interviewing. In addition, third wave therapies such as skill modules from dialectical behavior therapy were used, with specific treatment approaches tailored to each client. All clients completed a 90-min intake session. In the vast majority of cases, the client was assigned to the intake clinician for psychotherapy, but a few clients were transferred to a second clinician. All cases began with a therapeutic assessment [35] that lasted between 3 and 5 sessions. There was a standard assessment battery built on the Personality Assessment Inventory and the NEO Personality Inventory-Revised [24], but additional measures were added as was necessary to answer presenting questions. At the beginning of every session the client completed the CORE Outcome Measure [36], a 34-item measure of pan-diagnostic psychological health and risk factors. In addition, on the first session and every 4th session thereafter both the client (self-report) and therapist (informant report) completed the Five-Factor Model Rating Form [37] to provide a brief indicator of the client's personality functioning. These measures were completed via a tablet to facilitate presentation to the client and track functioning over time.

Participants

Over the 4-year period 69 potential clients scheduled appointments for intake sessions and 54 matriculated for at least 1 session. Those 54 clients ranged in age from 13 to 72 years, with a mean of 29.9 years ($SD = 13.2$). Most clients were female (67%) and Caucasian (80%). In terms of marital status, 26 (48%) were single and 30% were married. The sample was highly educated, with approximately half holding a 4-year college degree or higher (10 of those had a masters or doctoral degree). The primary presenting problems coded via the intake interview were wide-ranging, with depression (44%) and anxiety (43%) being the most common. Other concerns included interpersonal difficulties (13%), stress (13%), suicidality/self-harm (11%), mania/bipolarity (9%), ADHD (7%), autism spectrum (4%), OCD (4%), and alcohol use (4%).

A total of 10 doctoral student clinicians in their 3rd year of training or beyond provided therapy under the supervision of the first author. All of the therapists either had a Master's degree or earned it while staffing this clinic. Demographically, there were 6 female and 4 male therapists and 8 were white while 2 were Asian. The number of clients treated by each clinician ranged from 2 to 16. All of the clients (or their legal guardians for those under the age of 18 years) provided written informed consent for treatment as well as that their information could be used confidentially in future research.

Psychotherapy Outcomes

The most simplistic outcome was the number of sessions a client remained in treatment. This ranged from a low of 1 session to a maximum of 58 sessions, with a mean of 11.6 sessions per client. The total number of sessions, of course, obscures aspects of treatment progress as clients with fewer sessions might signal a rapid therapeutic success, be due to outside factors (e.g., moving out of the area), or suggest premature termination of therapy. As such, we sought to characterize these outcomes in additional, more nuanced, ways.

One such marker is initial engagement in therapy. Given the format of this clinic, remaining for at least 4 sessions indicates completion of the therapeutic assessment protocol and development of a treatment plan. As such, completing 4 or more sessions represents an initial engagement in the therapeutic process. Of the 54 clients with at least 1 session, 39 (72%) completed at least 4 sessions, indicating that initial engagement was achieved.

Finally, we computed the difference between the total score on the CORE-34 at the client's first session from the total score at the last session for those 46 clients who attended at least 2 sessions. This provided an index of pre-post change and indicated symptom improvement across treatment from the perspective of the client (i.e., positive values indicated greater improvement). This was calculated as a raw difference score regardless of how many sessions the client attended in order to provide a standard measure of outcome over treatment. The difference scores were available for 46 clients and ranged from -0.55 to 1.83 , with a mean of 0.62 , indicating a wide variety of symptom trajectories, with an overall trend toward symptom reduction. We also sought to understand the degree of change observed in this sample so we calculated the Reliable Change Index. This involved first computing the standard error of the measure (SEM) by multiplying the SD of the CORE-34 at baseline ($SD = 0.64$) by the square root of $1 - \text{reliability}$ (Cronbach $\alpha = 0.93$). The resulting SEM value for the CORE-34 was 0.17 and each individual change score was divided by this value. Individuals whose Reliable Change Index scores exceeded 1.96 were deemed to show reliable change. By this metric, 30 of the 46 individuals showed reliable improvement, 12 did not change appreciably, and 4 showed reliable deterioration over therapy.

Results

Session One Personality Predicting Psychotherapy Outcomes

Table 1 presents the univariate relations of the FFM domains as reported by therapists and clients at baseline

Table 1. Baseline FFMRF domain correlations with psychotherapy outcomes

	≥4 sessions ^a (<i>n</i> = 52)		Number of sessions ^b (<i>n</i> = 52)		Symptom improvement ^c (<i>n</i> = 46)	
	<i>rpb</i>	95% CI	<i>r</i>	95% CI	<i>r</i>	95% CI
Client						
N	0.07	-0.21 to 0.34	0.08	-0.20 to 0.35	0.14	-0.16 to 0.41
E	-0.06	-0.33 to 0.22	-0.04	-0.31 to 0.24	-0.16	-0.43 to 0.14
O	0.09	-0.19 to 0.35	0.15	-0.13 to 0.41	0.12	-0.18 to 0.40
A	0.06	-0.21 to 0.33	-0.11	-0.37 to 0.17	0.02	-0.27 to 0.31
C	0.04	-0.24 to 0.31	0.02	-0.25 to 0.29	-0.07	-0.35 to 0.22
Therapist						
N	-0.04	-0.31 to 0.24	0.22	-0.06 to 0.46	0.34	0.06 to 0.57
E	0.05	-0.23 to 0.32	-0.18	-0.43 to 0.10	-0.11	-0.39 to 0.19
O	-0.14	-0.40 to 0.14	-0.05	-0.32 to 0.23	0.15	-0.15 to 0.42
A	0.10	-0.18 to 0.36	-0.09	-0.35 to 0.19	0.02	0.06 to 0.57
C	0.39	0.13 to 0.60	0.14	-0.14 to 0.40	-0.02	-0.31 to 0.27

FFMRF, Five-Factor Model Rating Form [37]; N, neuroticism; E, extraversion; O, openness to experience; A, agreeableness; C, conscientiousness. ^a Dichotomous variable of staying at least 4 sessions. ^b Total number of sessions attended. ^c Difference between the CORE-34 total score at the first session and the score at the last session.

(i.e., at session 1) with the psychotherapy outcome indicators. Correlations were very small for all client-reported domains, indicating that client-reported personality traits from the first session were mostly unrelated to any of the treatment outcomes. The largest of the correlations was -0.16 between client-rated extraversion and symptom reduction. It is notable that no baseline client-reported domains were related meaningfully to initial engagement in therapy.

In contrast, when considering the therapist-reported personality traits in the lower rows of the table, there were 5 values above 0.20. The largest effect was for therapist-reported conscientiousness, which obtained a point-biserial correlation of 0.39 (95% CI 0.13–0.60) with initial engagement in therapy. This indicated that the higher a therapist rated a client on conscientiousness after 1 session, the more likely that client was to remain for at least 4 sessions. When considering the long-term therapy outcomes, therapist-reported neuroticism obtained at least a small effect with overall symptom improvement ($r = 0.34$; 95% CI 0.06–0.57) and total number of sessions ($r = 0.22$; 95% CI -0.06–0.46). This indicates that the higher the therapist rating of neuroticism after 1 session, the more the symptoms improve over therapy and the more sessions that the client attends.

Considering the strong finding for therapist-rated conscientiousness on initial engagement, we sought to investigate the specificity of this link using multivariate

analyses. Given the dichotomous outcome variable, binomial logistic regressions were performed to ascertain the effects of client- and therapist-rated domains on the likelihood of the client staying through 4 sessions. When therapist ratings were included alone, the model was not statistically significant for predicting initial engagement ($\chi^2 [5] = 10.261$, $p = 0.068$, Cox and Snell $R^2 = 0.186$, Nagelkerke $R^2 = 0.272$), but it did correctly classify 78% of the cases. Therapist-rated conscientiousness was the only significant predictor when therapist-rated domains were entered independently (Wald = 6.3, $p = 0.012$) or when they were entered jointly with client-rated domain scores (Wald = 6.2, $p = 0.013$).

Time 2 Personality Ratings Predicting Therapy Outcomes

Given the format of the clinic battery, clients and therapists completed ratings again at approximately the fourth session (the exact timing varied depending on the length of the therapeutic assessment). These subsequent ratings include only those clients who completed at least 4 sessions and had available personality ratings ($n = 34$) and so we investigated their utility for predicting long-term therapy outcomes. As seen in Table 2, client-rated openness to experience obtained a large effect size relating to symptom reduction ($r = 0.49$; 95% CI 0.18–0.71). In total, 4 additional client-rated domain scores and 1 therapist-rated domain score had at least small effects

Table 2. FFMRF domain correlations with psychotherapy outcomes

	Number of sessions ^a (<i>n</i> = 34)		Symptom improvement ^b (<i>n</i> = 34)	
	<i>r</i>	95% CI	<i>r</i>	95% CI
Client				
N	-0.01	-0.35 to 0.33	0.00	-0.34 to 0.34
E	0.18	-0.17 to 0.49	0.07	-0.27 to 0.40
O	0.25	-0.10 to 0.54	0.49	0.18 to 0.71
A	0.21	-0.14 to 0.51	0.20	-0.15 to 0.50
C	0.04	-0.30 to 0.37	-0.22	-0.52 to 0.13
Therapist				
N	0.12	-0.23 to 0.44	0.09	-0.26 to 0.42
E	-0.15	-0.46 to 0.20	-0.08	-0.41 to 0.27
O	-0.05	-0.38 to 0.29	0.34	0.00 to 0.61
A	0.09	-0.26 to 0.42	0.14	-0.21 to 0.46
C	0.09	-0.26 to 0.42	0.04	-0.30 to 0.46

FFMRF, Five-Factor Model Rating Form [37]; N, neuroticism; E, extraversion; O, openness to experience; A, agreeableness; C, conscientiousness. ^aTotal number of sessions attended. ^bDifference between the CORE-34 total score at the first session and the score at the last session.

(i.e., larger than |0.20|) for one of the outcomes. Client-rated openness and client-rated agreeableness were positively related ($r = 0.20$; 95% CI -0.15 to 0.50) and client-rated conscientiousness was negatively related ($r = -0.22$; 95% CI -0.52 to 0.13) to symptom improvement. Therapist-rated openness at time 2 also had a medium effect ($r = 0.34$; 95% CI 0.00 – 0.61) on symptom improvement. Finally, client-rated openness ($r = 0.25$; 95% CI -0.10 to 0.54) and agreeableness ($r = 0.21$; 95% CI -0.14 to 0.51) from time 2 were both positively linked with total number of sessions.

Although the outcomes differ in appreciable ways, it is also informative to examine effects across the columns to identify specific traits that are more robustly linked with psychotherapy outcomes. In this way, it is notable that client-rated openness was not only strongly related to symptom improvement but also moderately linked to number of sessions. Although the overall effects were smaller than for openness, client-rated agreeableness also was moderately (i.e., ≥ 0.20) related to both outcome variables. Particularly in light of the small sample size, this consistent relation across outcomes suggests that openness to experience, and potentially agreeableness, as rated by the client are most relevant to positive outcomes.

In order to more fully arbitrate the contribution of different trait domains (as rated by both parties), we utilized

multivariate techniques. Specifically, we conducted a series of hierarchical linear regressions that used the client domains, therapist domains, and both simultaneously for predicting the symptom improvement. This outcome was chosen because it represented a continuous variable and maximized the available sample size. When the client domains were entered alone, the overall R^2 was 0.34 ($p = 0.04$) and the only significant predictor was openness to experience ($\beta = 0.52$, $p = 0.01$). When therapist domains were entered alone, the R^2 was 0.26 ($p = 0.14$) and again the openness score was the only significant predictor ($\beta = 0.59$, $p = 0.01$). When all 10 predictors were entered simultaneously, the overall R^2 was 0.43 ($p = 0.09$). In this joint model, no single predictor was significant, but there was a high collinearity for client- and therapist-rated openness (e.g., variance inflation factor values of 4.1 and 5.6, respectively). In a separate model we entered only the client- and therapist-rated openness to experience domain scores. The overall model was statistically significant ($R^2 = 0.24$, $F[2, 29] = 4.67$, $p = 0.02$) and client-rated openness emerged as a stronger predictor ($\beta = 0.48$, $p = 0.03$) than therapist-rated openness ($\beta = 0.02$, $p = 0.93$).

Discussion

An increasing number of studies have examined how client personality traits moderate the outcomes of psychotherapy [22]. However, this literature has relied on clients' self-reported traits at the outset of therapy. The present study extended past research by incorporating personality traits as rated by the treating therapist, in addition to the clients' self-reports. Further, these ratings were collected at the outset of therapy and then again after 4 weeks of clinical contact to investigate the ability of these ratings to predict a number of treatment outcomes.

The collection of therapist ratings proved informative as they incremented the client ratings for predicting outcomes. Specifically, lower levels of therapist-rated conscientiousness following the first session uniquely predicted clients who did not initially engage in therapy (i.e., dropped out before the fourth session). This was particularly informative as there was no client-rated personality domain that appreciably related to this important indicator of early treatment engagement. It suggests that clinicians are detecting information about a client's level of motivation and reliability in just 1 session (i.e., a "thin slice" of behavior [38]) that is relevant to their attendance and commitment to therapy. From the present data we are unable to determine process level details, such as whether the trait

itself impacts treatment, or whether the act of a therapist assigning such a rating may affect the therapist's engagement with the client. Nonetheless, the connection between trait conscientiousness and early engagement is intuitive as it indicates a willingness to put in the effort necessary for successful psychotherapy [21, 39]. A recent meta-analysis indicated that the patient's levels of conscientiousness (self-reported) were linked with medication adherence [40] and it is natural to predict that this domain would also be related to attendance and homework completion within psychotherapy [39]. Nonetheless, this is an area with a fairly shocking lack of research and we join Bagby et al. [22] in calling for additional studies that probe the link of conscientiousness, as well as other traits, to proximal and distal treatment outcomes.

As indicated above, the majority of studies that have examined the utility of FFM traits for predicting therapy outcomes have utilized ratings from the beginning of therapy. Examining baseline personality traits is understandable given the way assessment is typically employed in treatment settings but it is also potentially problematic for the predictive validity of ratings by clients as well as therapists. Clients typically enter therapy near the height of their distress and these state effects may complicate the valid assessment of long-standing traits [33]. State effects at treatment outset might also impact clinician ratings, but a larger concern is that therapists' limited interaction with – and information about – the client may preclude a fulsome picture of personality functioning. Indeed, we observed that personality variables reported after 4 sessions were more robustly linked with long-term outcomes.

Across Table 2 it was clear that the most consistent findings were for the domain of openness to experience – as well as agreeableness, to a lesser extent. Interestingly, and in contrast with the baseline ratings, the time 2 correlations were stronger for the client-rated domains than the therapist-rated traits. Client-rated openness correlated above 0.20 with each of the 3 outcomes and had its strongest link with overall symptom reduction ($r = 0.49$). Similarly, when all of the client-rated domains were entered simultaneously in a multivariate analysis, the client ratings of openness uniquely predicted the overall symptom improvement over the course of therapy. This effect of openness was also not limited to client report. When each of the 5 therapist-rated domains were entered simultaneously in a regression, a higher openness also best predicted the overall symptom reduction in therapy. However, when therapist and client domains were entered jointly, it was client-rated openness that was the significant predictor. Thus, it appears that openness to ex-

perience is the FFM domain most predictive of long-term treatment outcomes, with client ratings apparently more informative than therapist-ratings.

Although openness has not been the domain commonly linked with treatment outcomes in past studies [22], there are a number of reasons that help explain its success in this study. As hypothesized by Miller [21], openness likely manifests in how a client reacts to the therapist's suggestions, and higher levels of openness indicate a greater willingness to consider alternative viewpoints and perhaps also a willingness to implement and “try out” therapeutic techniques. Relatedly, a number of studies have demonstrated that higher levels of “emotional openness” or “internal experiencing” are associated with positive outcomes, particularly in experiential psychotherapies [41]. There is additional literature reporting that clients who are high in alexithymia (i.e., low openness to experiencing emotions [42]) have poorer treatment outcomes [43, 44]. Openness to experience is also the FFM domain most strongly linked with IQ and verbal ability and so it is also possible that the influence of openness may be mediated through those variables. When considering that client-rated openness outperformed therapist ratings, it is worth noting that openness is one of the most internal and unobservable domains [45]. This may help to explain why this is harder for therapists to accurately rate openness after only 4 sessions.

The effects of agreeableness on long-term outcomes were larger for client report than from the therapists. As a highly interpersonal domain, these agreeableness ratings may be reflecting an interpersonal process playing out in the therapeutic relationship [46] and are worthy of future consideration.

Implications

Overall, the present results suggest that the story about which traits are relevant to predicting outcomes is nuanced by the source and the time the data are provided. With regard to the source of the information, based on these findings we can conclude that both clients and therapists provide valid information about outcomes. Thus, as with other types of informants, clients and therapists have reciprocal validity for predicting therapeutic outcomes. More broadly, though, our findings continue to support the validity of clients' own personality descriptions, consistent with Samuel et al. [28], and may help to allay concerns about the inherent invalidity of self-report based on lack of insight or deliberate distortion [47].

Nonetheless, the finding that therapist-rated personality trait variables were predictive of treatment outcomes,

particularly initial engagement in psychotherapy, reinforces the importance of assessing personality from multiple sources. It also indicates that collecting ratings from therapists yields useful information and is worthy of continued research attention [48]. Given that virtually all that is known about the relationship between client personality and psychotherapy outcomes is based on self-report, the present results strongly suggest that the inclusion of therapist ratings in future studies will yield important insights.

Limitations

This is one small sample from a particular clinic staffed by trainee clinicians, and these findings should be considered preliminary until replicated in larger, more robust samples. Given the sample size the correlations should be considered estimates and the 95% CI around these correlations bear out the inherent unreliability of associations at this level of power. Nonetheless, given the novelty of this data such as including therapist ratings, as well as the relatively robust pattern of correlations with the long-term outcomes, we do feel these data are worthy of cautious interpretation.

Another notable limitation of this effort is that we were not able to consider or control for nonspecific factors or known moderators of psychotherapy outcomes, including therapist factors. For example, the therapeutic approach within this clinic was fairly eclectic and determined by the clients' needs but largely centered around CBT principles, motivational interviewing techniques, and a strong component of skills drawn from the dialectical behavior therapy modules. Further, we did not consider intertherapist variation in techniques, competence, or demographic variables – either in isolation or in terms of a match with a given client. Thus, it is unknown to what extent the individual findings here might represent an idiosyncratic blend of factors that happened to present at this clinic or within this particular stream of clients.

Given that the data were drawn from an ongoing clinical case series and not a specifically designed treatment

outcome study, there was no ability to control for other known moderators of treatment outcome. For example, it is known that therapeutic alliance and initial severity of symptoms, among other variables, are highly relevant to outcomes and some research indicates that controlling for these factors accounts for the effect of personality on outcome [13]. Thus, the present data do not suggest that personality traits are the ideal or unique predictors of outcome. Rather, the data indicate that personality traits do appear to predict multiple indicators of psychotherapy success when considered in isolation.

Conclusions

Most broadly, these analyses indicated that personality traits were modestly, yet consistently, related to short-term and long-term treatment outcomes in a case series of 54 clients. Most notably, there was no simplistic winner with regard to source as therapist- and client-rated traits both provided useful information about specific outcomes. Therapist-rated conscientiousness was most predictive of initial engagement in psychotherapy (i.e., staying at least 4 sessions), whereas client-rated openness after the fourth session was most strongly predictive of symptom reduction over the course of therapy. While acknowledging limitations, including the small sample size and the lack of control for other known moderators, the present results suggest a role for personality traits in planning treatment and emphasize the importance of obtaining ratings from therapists, as well as clients, at multiple points over therapy.

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