Do Baseline Client Characteristics Predict the Therapeutic Alliance in the Treatment of Schizophrenia?

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Abstract: This study examined clinical predictors of client and therapist alliance ratings early in therapy, the relationship between client and therapist alliance ratings, and the psychometric properties of the Working Alliance Inventory in individuals with schizophrenia receiving manual-based treatment. Assessment of clinical symptoms and social functioning were conducted at baseline, and alliance ratings were obtained at 5 weeks. The Working Alliance Inventory had high internal consistency, but there were low correlations between client and therapist ratings. Results also indicated that social functioning and the activation and autistic preoccupation factors on the Positive and Negative Syndrome Scale were significant predictors of therapists' alliance ratings. There were no significant relationships between clinical predictors and clients' therapeutic alliance ratings. The findings indicate that client interpersonal factors are significant predictors of the therapist-rated alliance in the treatment of schizophrenia. Low correlations between clients' and therapists' ratings of the alliance should be examined in future research.

Key Words: Alliance, psychosocial treatment, schizophrenia.

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The emotional and collaborative relationship formed between the client and therapist in psychotherapy, commonly referred to as the *therapeutic alliance*, is an important ingredient for positive outcome (Horvath and Symonds, 1991; Krupnik et al., 1996; Martin et al., 2000). Two meta-analyses found that the therapeutic alliance is modestly associated with outcome (with an effect size between .22 and .26), and that this relationship held regardless of the intervention studied (Hovarth and Symonds, 1991; Martin et al., 2000). Among individuals with schizophrenia, the therapeutic alliance is related to global functioning, reduced symptom severity, better quality of life, improved social functioning,

and greater medication compliance (Frank and Gunderson, 1990; Gehrs and Goering, 1994; Neale and Rosenheck, 1995; Olfson et al., 1993; Solomon et al., 1995; Svensson and Hansson, 1999). Given the challenging task of engaging clients with schizophrenia in treatment and encouraging treatment continuation (Fenton et al., 1997; Roberts et al., 2004; Tarrier and Bobes, 2000), these findings are promising, and suggest that a positive therapeutic alliance can be formed with persons with schizophrenia and may impact treatment continuance and outcome.

The consistent relationship between therapeutic alliance and outcome highlights the importance of identifying factors that influence or predict the development of a strong alliance (Gibbons et al., 2003). In nonpsychotic samples, client demographic characteristics do not appear to play a role in alliance formation (Constantino et al., 2002; for an exception see Gibbons et al., 2003). Research also indicates that client symptoms are not related to ratings of therapeutic alliance by either the therapist or client (Gibbons et al., 2003; Hersoug et al., 2002; Marmar et al., 1989; Moras and Strupp, 1982; Saunders, 2001; for an exception, see Eaton et al., 1988), whereas pretreatment interpersonal functioning (Eltz et al., 1995; Gibbons et al., 2003; Hersoug et al., 2002; Kokotovic and Tracey, 1990; Mallinckrodt, 1991; Marziali, 1984; Moras and Strupp, 1982; however, see Gaston et al., 1988; Mallinckrodt, 1996; Santiago et al., 2002, for exceptions to these findings) and several intrapersonal variables, such as hostility and a detached style, have been found to predict therapeutic alliance ratings (Hersoug et al., 2002; Kivlinghan et al., 1998; Saunders, 2001).

Fewer studies have examined the relationship between pretreatment client characteristics and alliance formation in individuals with schizophrenia. In a rare longitudinal study, Svensson and Hansson (1999) reported that client complaints/problems and pretreatment levels of working ability and social relationships significantly predicted stronger client-rated alliance. Interestingly, these findings were not replicated in designs utilizing concurrent assessment of alliance and client characteristics in treatment-seeking outpatients with schizophrenia (Gehrs and Goering, 1994; Neale and Rosenheck, 1995). Ratings of global functioning also appear to be inconsistently correlated with concurrent alliance ratings, with lower baseline global functioning significantly correlated with lower alliance ratings in one study (Allen et

al., 1985), but not in other studies (Clarkin et al., 1987; Neale and Rosenheck, 1995).

The longitudinal study by Svensson and Hansson (1999) was also notable because there were different predictors of client versus therapist rated alliance. It is unclear whether the lack of association between the two sources of alliance ratings may itself be a feature of schizophrenia, with some studies revealing high associations (with correlation coefficients between .69 and .72; Gehrs and Goering, 1994) and others providing much lower estimates (.20; Neale and Rosenheck, 1995), as compared with the fairly modest agreement between client and therapist ratings in other disorders (approximately .40; Hersoug et al., 2001).

In summary, interpersonal functioning has shown a modest relationship with alliance formation among nonpsychotic individuals, and has shown promise in the only longitudinal study of alliance in schizophrenia. Attention to the predictive significance of interpersonal functioning is especially important in schizophrenia spectrum disorders, where social and interpersonal deficits are common, even after successful neuroleptic treatment (Wiersma et al., 1998). In addition, the symptoms associated with schizophrenia spectrum disorders are markedly different from those associated with other disorders. Thus, it is not clear whether findings from nonpsychotic samples, which failed to show a relationship between symptoms and the alliance, can be generalized to schizophrenia. For example, negative symptoms, such as social and emotional withdrawal and blunted affect, seem similar to a detached style of interaction with others, which is related to poorer alliance in nonpsychotic samples (Hersoug et al., 2002; Kivlinghan et al., 1998; Saunders, 2001).

The purpose of the present study was to examine the factors that predict the therapeutic alliance among individuals with schizophrenia receiving either structured psychoeducational or cognitive-behavioral treatment. Baseline predictors included psychotic symptoms and social functioning, and the alliance was assessed following 5 weeks of treatment. Given previous indications of poor agreement between therapist and client ratings of alliance (Neale and Rosenheck, 1995), we examined client and therapist alliance ratings separately. The following hypotheses were formulated: 1) there would be a significant relationship between therapist and client ratings of the alliance, and 2) lower negative symptoms and better social functioning at baseline would significantly predict greater clinician and client ratings of the therapeutic alliance 5 weeks into therapy.

METHODS

Participants

Participants were part of a randomized clinical trial comparing a cognitive-behavioral intervention to psychoeducation for individuals with chronic schizophrenia (Cather et al., 2005). Participants were recruited from outpatient clinics in Boston ($N = 18$) and at the University of North Carolina-Chapel Hill ($N = 12$). To be eligible for the study, participants met the following criteria: 1) DSM-IV diagnosis of either schizophrenia or schizoaffective disorder, 2) on a stable medication regimen including olanzapine for the past 3

months, 3) aged 18 to 65, 4) no developmental disability, 5) no substance use disorder in the past 6 months, 6) IQ of at least 70, and 7) presence of delusions or hallucinations of at least "minimum severity" according to the Positive and Negative Syndrome Scale (PANSS; presence of one or two delusions or hallucinations that minimally impact behavior). Demographic and diagnostic characteristics for participants are provided in Table 1.

Measures

Positive and Negative Syndrome Scale

Research assistants who had been trained to adequate reliability (ICC >.80 with a gold standard rater) and were blind to treatment condition administered the PANSS (Kay et al., 1987). For the current study, the five-factor solution of the PANSS was used (White et al., 1997): positive symptoms, negative symptoms, dysphoric mood, activation (indicating overactivation), and autistic preoccupation.

Social Functioning Scale

The Social Functioning Scale (SFS; Birchwood et al., 1990) is a commonly used measure of social and occupational functioning for individuals with schizophrenia. The SFS is comprised of 74 items that are rated by the respondent on Likert and frequency scales. The SFS was developed for schizophrenia research and has excellent psychometric properties (Birchwood et al., 1990). For this study, the total score on the SFS was used as an index of social functioning (mean = 120.9, $SD = 23.8$).

Working Alliance Inventory

The Working Alliance Inventory (WAI; Horvath and Greenberg, 1986, 1989) is comprised of 36 statements (e.g., "the therapist (or client) and I understand each other") that are rated on a 7-point Likert scale anchored by 1, "never," and 7, "always." The WAI has adequate reliability and validity across a variety of diagnoses (Horvath and Greenberg, 1989; Tichenor and Hill, 1989). An overall index of the alliance is computed by summing across the 36 items (therapist rating: mean = 192.8, $SD = 34.4$; client rating: mean = 199.5, $SD = 27.8$).

The therapist and client were asked to complete the WAI and place their ratings in a sealed envelope, which was given to a research assistant. To reduce a social desirability bias, the therapist and client were informed that their responses would not be shared with each other, but would be available only to members of the research staff.

Treatments

Participants were randomly assigned to receive either a cognitive-behavioral intervention or a psychoeducation intervention for 16 weekly sessions, followed by 4 biweekly booster sessions. These treatments are described elsewhere (Cather et al., 2005). Analyses were collapsed across treatments as previous research has shown that the type of intervention does not typically impact alliance (Martin et al., 2000) and both treatments have a specific focus on developing a strong therapeutic alliance with the client. A clinical psychologist (D. L. P. or C. C.) reviewed audiotaped therapy sessions and conducted weekly supervision with therapists to

TABLE 1. Participants' Demographic Characteristics

	Total, N = 30		NC, N = 12		Boston, N = 18	
	Mean	**(SD)**	**Mean**	**(SD)**	**Mean**	**(SD)**
Age**	40.87	(11.74)	33.08	(10.34)	46.06	(9.72)
Years of education	13.82	(1.91)	14.58	(2.07)	13.25	(1.61)
Years of illness†	18.57	(12.97)	8.83	(9.12)	25.06	(11.03)
Olanzapine dosage	19.90	(8.49)	16.39	(9.45)	21.88	(7.50)
PANSS-autistic*	10.23	(4.16)	8.00	(2.23)	11.72	(4.52)
PANSS-activation	5.97	(2.30)	5.25	(1.48)	6.44	(2.63)
PANSS-dysphoric*	13.80	(4.08)	13.33	(2.77)	14.11	(4.81)
PANSS-positive	13.33	(3.81)	13.08	(3.03)	13.50	(4.33)
PANSS-negative	14.20	(4.91)	12.17	(3.86)	15.56	(5.16)
	Percent (N)		**Percent (N)**		**Percent (N)**	
Female*	43.3 (13)		66.7 (8)		27.8 (5)	
Ethnicity						
Caucasian	70 (21)		66.7 (8)		72.2 (13)	
African American	26.7 (8)		33.3 (4)		22.2 (4)	
Hispanic	3.3 (1)		0 (0)		5.6 (1)	
Diagnosis						
Schizophrenia	63.3 (19)		58.3 (7)		66.6 (12)	
Schizoaffective	36.7 (11)		41.7 (5)		33.3 (6)	

*Significant between-group difference at $p = 0.05$; **significant at 0.01; †significant at 0.001.

maintain treatment fidelity. Mean therapist age was 34.3 years with 7.8 years of previous clinical experience. Most of the therapists (66.7%) were male.

RESULTS

Data Analysis Overview

We first examined the reliability of the WAI to provide preliminary data on the psychometric properties of this measure with clients with schizophrenia, as there has been little work in this area. Next, we computed correlations between client and therapist ratings on the WAI. Correlations between baseline predictors (symptoms and social functioning) and therapeutic alliance ratings were then examined separately for clients' and therapists' ratings. Finally, we conducted a hierarchical multiple regression analysis to examine the unique contribution of the significant predictors to the WAI total score at week 5.

Site Differences

We conducted a series of tests to determine whether it would be necessary to control for site in the data analyses. Boston participants were significantly older, had a longer duration of illness, included a greater proportion of male participants, and had greater PANSS scores on the dysphoric and autistic preoccupation factors (all p values <0.05). However, none of these demographic or clinical variables were significantly associated with either the client or therapist WAI ratings. Therefore, we did not control for these variables in the primary analyses.

Reliability Analyses and Intercorrelations Between the Client and Therapist on the Working Alliance Inventory

Scale reliability analyses were conducted on the WAI for both clients and therapists. Both versions had a high level of internal consistency, ranging from .94 for client ratings to .97 for therapist ratings. The correlation between client's and therapist's WAI-Total ratings was not statistically significant ($r = .144$; $p = 0.545$).

Correlations Between Baseline Variables and Alliance Ratings at Week 5

Correlations between client alliance ratings and baseline variables are presented in Table 2. Because of the number of correlation coefficients, we applied a Bonferroni correction of $p < 0.008$ to the analyses. There were no significant correlations between client ratings and any of the predictors. As a result, client ratings were not considered in multiple regression analyses.

TABLE 2. Correlations Between WAI Scores and Predictors for Clients and Therapists

Predictor	WAI-client	p	WAI-therapist	p
PANSS-positive	−.257	0.260	−.195	0.351
PANSS-negative	.007	0.975	−.278	0.178
PANSS-dysphoric	−.092	0.692	−.269	0.194
PANSS-activation	.032	0.892	−.563**	0.003
PANSS-autistic preocc	−.244	0.287	−.490*	0.013
SFS	−.001	0.997	.411*	0.041

*$p < 0.05$; **Bonferroni-corrected α ($p < 0.008$).

A greater therapeutic alliance from the therapist's perspective was associated with lower ratings on the activation and autistic preoccupation factors of the PANSS, and greater social functioning (Table 2). Although the PANSS activation factor was the only variable statistically significant at the Bonferroni-corrected α level, we entered all three variables in hierarchical regression analyses that were significant at the $p < 0.05$ level, given the relatively small sample size of this study.

Hierarchical Regression Analyses

We entered baseline social functioning in the first step of the hierarchical multiple regression analyses, given the hypothesis that greater social functioning would be related to alliance formation. The R^2 change for the first step was statistically significant (R^2 change $= .169$; $p = 0.041$); social functioning accounted for over 16% of the variance in therapist alliance ratings. The addition of the PANSS activation and autistic preoccupation factors in the second step contributed an additional 25% variance, which was statistically significant ($p = 0.023$). Thus, baseline social functioning and specific symptoms accounted for 34% of variance, and significantly predicted ($p = 0.009$) the therapeutic alliance at 5 weeks.

DISCUSSION

The purpose of this study was to examine the baseline client characteristics that predicted the working alliance 5 weeks into therapy. A secondary goal was to examine the correspondence between client and therapist alliance ratings. The findings, and our interpretation of them, are discussed below.

Our hypothesis that baseline social functioning would be associated with the therapeutic alliance at week 5 was supported. Baseline social functioning was a significant predictor of therapist alliance ratings, a finding that is consistent with the general psychotherapy literature (e.g., Gibbons et al., 2003; Hersoug et al., 2002), and with a previous longitudinal investigation of the treatment of schizophrenia (Svensson and Hansson, 1999). Indirect support for this hypothesis was also garnered from the finding that the activation factor on the PANSS significantly predicted therapist ratings of the alliance as the symptoms that comprise this factor, such as hostility, uncooperativeness, and excitement, are interpersonal in nature.

There was mixed support for the hypothesis that negative symptoms would predict the therapeutic alliance. Although the negative symptom factor was not significantly associated with therapist alliance ratings, the autistic factor was significantly related (although not at the Bonferroni-corrected α level). This factor includes the symptoms of disturbance in volition and psychomotor retardation, which have traditionally been considered negative symptoms (note: the correlation between these factors, .775, was significant in our sample). Thus, behaviors in the negative symptom spectrum may be associated with formation of the therapeutic alliance.

In contrast to the foregoing, there were no significant baseline predictors of the client's therapeutic alliance ratings, and there was not a significant association between client and therapist ratings of the alliance. If client ratings of alliance are not associated with baseline levels of symptoms or social adjustment, and are not related to their therapist's alliance ratings, what then might account for variation among alliance scores in clients? Research with clients with major depression suggests that client ratings of alliance were strongly associated with clinical improvement, but that changes in alliance followed rather than preceded clinical improvements (Tang and DeRubeis, 1999). Thus, assessment of expectations of improvement (Gibbons et al., 2003) and ongoing assessments of level of improvement is a promising area for further investigation of client's alliance ratings during the treatment of schizophrenia (if the mechanism of alliance change is similar to that observed in depression). Finally, greater attention needs to be placed on client perceptions of therapist characteristics, as clients with schizophrenia especially value therapist friendliness and the ability to provide support (Coursey et al., 1991; 1995).

Our findings of a low correlation between therapist and client ratings of alliance replicated previous findings (Neale and Rosenheck, 1995). These findings suggest that therapist perceptions of how the client values therapy may not always be consistent with the client's perspective. In an exploratory study, Tarrier et al. (1998) found that the most common reason clients with schizophrenia reported that they discontinued treatment was that it was not useful for their problem. Future research should examine the reasons underlying this discrepancy between client and therapist perceptions because if therapists are unable to anticipate the needs of clients, dissatisfaction with therapy may occur, and treatment progress may be delayed (or dropouts may occur).

CONCLUSION

In summary, the primary findings of this study were that baseline social functioning as well as activation and autistic preoccupation (as measured by the PANSS) were the most significant predictors of therapist's perceptions of the therapeutic alliance, and that there were no significant relationships between therapist and client alliance ratings. These findings suggest that clients with schizophrenia who enter treatment with poorer social functioning may be judged by therapists as forming a poor alliance in therapy, but that clients may be unlikely to share this opinion. Future research should replicate these findings with a larger sample size and with assessments of the therapeutic alliance conducted throughout treatment, not just early in therapy.

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