THERAPEUTIC ALLIANCE IN GROUP THERAPY FOR SCHIZOPHRENIA

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ABSTRACT

DAVID P. JOHNSON: Therapeutic Alliance in Group Therapy for Schizophrenia
(Under the direction of David Penn, Ph.D.)

This study explored the relationship between baseline client characteristics (i.e. age, symptoms, insight, social functioning) and group alliance in 63 outpatients with schizophrenia spectrum disorders. Results indicate that a stronger group alliance was associated with overall higher levels of group insight. In addition, stronger group alliance was significantly correlated with higher attendance rates and therapists' ratings of treatment compliance. These findings have implications for determining group composition and identifying clients low in therapeutic engagement. Suggestions for future research on group alliance are also discussed.

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THERAPEUTIC ALLIANCE IN GROUP THERAPY FOR SCHIZOPHRENIA

Therapeutic alliance is conceptualized as the emotional and collaborative relationship between a client and therapist and is described as a "non-specific" factor due to its application across treatments (Bordin, 1979). Meta-analyses and narrative reviews of individual therapy across diagnoses report a significant association between alliance and treatment outcome in 66-70% of studies (Luborsky and Auerbach, 1985; Orlinsky et al., 1994) with modest effect sizes (.22-.26; Horvath and Symonds, 1991; Martin et al., 2000). There have been multiple important outcomes associated with stronger therapeutic alliance among clients with schizophrenia. These include lower client-perceived problems and symptom severity (Frank and Gunderson,1990; Gehrs and Goering, 1994; Neale and Rosenheck, 1995), higher general and social functioning (Frank and Gunderson,1990; Neale and Rosenheck, 1995; Svensson and Hansson, 1999), greater medication compliance and fewer required medications (Dolder et al., 2003; Frank and Gunderson, 1990), better attitudes toward treatment (Day et al., 2005), and lower drop-out rates (Frank and Gunderson,1990). These findings from individual therapy research underscore the importance of examining therapeutic alliance in group therapy, which may be a more effective modality than individual therapy within psychotic populations (reviewed in Kanas, 1996) as well as having greater financial and time feasibility across diagnoses (MacKenzie, 1994).

Therapeutic alliance can be divided into two dimensions when discussed in the context of group therapy (Gillaspy et al., 2002). The first dimension is the specific client-

therapist relationship for each group member, referred to as the "individual alliance." This dimension can be measured from the client's and/or therapist's perspective (e.g., the client in a treatment group rating his alliance with the therapist) and is the most frequently discussed dimension of the alliance in group settings. In fact, a recent review found that 9 of 13 group therapy studies defined therapeutic alliance only in terms of individual alliance (Johnson, in press). And, consistent with studies of individual therapy, Johnson (in press) reported that stronger individual alliance (in a group context) predicted improved outcomes such as reduced symptoms and lower dropout rates in 11 of 13 group therapy studies spanning various clinical populations and theoretical orientations.

The second dimension is "group alliance," or the relationship of an individual with the entire group. Only one study has measured group alliance as a unique construct (Budman et al., 1989). This dimension may be particularly important as clients in group therapy rate interpersonal factors, such as relationship-climate and other- versus self-focus, as more important to them than do clients in individual therapy (Holmes and Kivlighan, 2000). These factors are therefore likely to be more prominent in a group vis-à-vis individual therapy modality.

Given the association of therapeutic alliance with clinical outcomes, it is important to identify factors that predict a better alliance in group therapy. In non-psychotic samples, stronger group alliance has been predicted by higher client self-esteem and fewer overall symptoms at baseline (Budman et al., 1989), while stronger group cohesion (a related construct) has also been predicted by fewer baseline symptoms (Gillaspy et al., 2002). Unfortunately, no research has examined client characteristics associated with the therapeutic alliance in group therapy for clients with schizophrenia. Thus, research on predictors of the

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alliance in the context of individual therapy for psychotic disorders may provide relevant information with respect to critical variables in a group context.

A variety of clinical and demographic variables are associated with the formation of therapeutic alliance among clients with psychotic disorders. Specifically, higher client baseline social and occupational functioning predicts a stronger therapeutic alliance (Couture et al., 2006; Frank and Gunderson, 1987). In addition, a stronger alliance is predicted by lower overall symptom levels (Frank and Gunderson, 1987), as well as lower ratings on specific symptoms, such as hostility and disturbances of volition (Frank and Gunderson, 1987) and the autistic preoccupation and activation factors (Couture et al., 2006) of the Positive and Negative Syndrome Scale (PANSS; Kay et al., 1987). Finally, higher insight ratings (Dunn et al., 2006; Svensson and Hansson, 1999) and being older than age 45 predicted stronger therapeutic alliance (Solomon et al., 1995). Taken together, these findings suggest that higher baseline social functioning, lower symptoms, greater insight, and older age predict the formation of stronger therapeutic alliance in individual therapy. However, the factors that predict therapeutic alliance in group therapy for clients with schizophrenia remain unknown.

The purpose of this study was to investigate the client characteristics that are predictive of group alliance among individuals with schizophrenia receiving either group cognitive-behavioral therapy (CBT) or supportive therapy (ST). Based on previous research on predictors of the alliance in individual therapy, the following baseline client characteristics were hypothesized to predict stronger client-rated group alliance: older age, lower levels of "autistic preoccupation" and "activation" on the PANSS, greater insight, and higher social functioning. Given the non-specific nature of the therapeutic alliance and the

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pantheoretical nature of the Working Alliance Inventory (WAI; Horvath and Greenberg, 1989), which was modified for use in a group format, we did not expect that type of therapy would have a main effect on group alliance or interaction with specific predictors. Finally, given the relationship between therapeutic alliance and outcome, exploratory analyses were conducted to examine the relationship between group alliance with treatment engagement and therapy attendance.

<div align="center">Methods</div>

Participants

Participants (*N*=63) were part of a randomized clinical trial comparing group CBT to ST for individuals with schizophrenia who experienced treatment-resistant auditory hallucinations, as defined below. The demographic characteristics of the participants are summarized in Table 1. Participants were recruited primarily from an outpatient clinic at the University of North Carolina-Chapel Hill, as well as from mental health centers in Wake and Durham Counties in North Carolina. To be eligible for the study, participants must have met the following criteria: 1) DSM-IV diagnosis of either schizophrenia or schizoaffective disorder [based on the Structured Clinical Interview for DSM-IV (SCID-P; First et al., 1995)]; 2) 18-65 years old; 3) IQ > 70 [measured by the Wechsler Abbreviated Scales for Intelligence (WASI; Wechsler, 1999)]; 4) no current substance dependence; and 5) auditory hallucinations of at least moderate severity (i.e., a rating of at least a 4 on the PANSS hallucinations item, described below), despite two previous medication trials, one of which was a stable regiment of an atypical neuroleptic for at least 8 consecutive weeks prior to randomization (Volavka et al., 2002).

Measures

Positive and Negative Syndrome Scale (PANSS). The PANSS (Kay et al., 1987) is a semi-structured interview with sound psychometric properties that is commonly used to assess the symptoms of schizophrenia. A research assistant, who had been trained to adequate reliability (ICC > .80 with a gold standard rater) and was blind to treatment condition, administered the PANSS. The five-factor solution of the PANSS was used in the present study: positive symptoms, negative symptoms, dysphoric mood, activation (indicating overactivation), and autistic preoccupation (White et al., 1997). The factors of particular interest in this study include activation (comprised of the following items: hostility, uncooperativeness, excitement) and autistic preoccupation (comprised of the following items: disturbance in volition, psychomotor retardation).

Beck Cognitive Insight Scale (BCIS). The BCIS (Beck et al., 2004) is a self-report scale that assesses cognitive insight in people with psychosis. Specifically, the BCIS assesses self-reflectiveness about unusual experiences, capacity to correct erroneous judgments, and certainty about mistaken judgments. The BCIS has been found to have adequate internal consistency and convergent validity, and factor analyses have identified two subscales, self-reflectiveness (nine items) and self-certainty (six items) (Beck et al. 2004). In the current study these subscales yielded Cronbach's alpha of .63 and .54, respectively. A composite Reflectiveness–Certainty Index (or R-C Index) score is computed with higher R-C Index scores indicating greater cognitive insight.

Social Functioning Scale (SFS). The SFS (Birchwood et al., 1990) is a commonly used self-report measure of social and occupational functioning for individuals with schizophrenia, which has excellent psychometric properties. For this study, the total score on the SFS was used as an index of social functioning, which yielded a Cronbach's alpha of .65.

Group Working Alliance Inventory-Client Rated (WAI-G). The WAI-G was created by modifying the WAI (Horvath and Greenberg, 1989), such that the client rated the relationship with the group (e.g., "the group and I understand each other") as opposed to the therapist only. There were no changes made to the WAI's 7-point Likert scale, anchors, number of items (36), or to the three subscales: the degree to which client and therapist/group become attached (i.e., "bond"), collaborate on specific therapeutic activities (i.e., "tasks"), and agree on the global objectives of therapy (i.e., "goals"). The clients completed the WAI-G at the mid-way point of treatment (i.e., at the sixth session) and placed their ratings in a sealed envelope, which were given to a research assistant. To reduce a social desirability bias, the client was informed that their responses would not be shared with the therapists, but would only be available to members of the research staff. Cronbach's alpha for the total score was .92 and the subscales all had reliability estimates greater than .74, indicating adequate reliability.

Psychosocial Treatment Compliance Subscale (PTCS). The PTCS (Tsang et al., 2006) is a 17-item, therapist-rated, Likert scale of compliance and treatment engagement with psychosocial interventions designed for people with psychotic disorders. It is comprised of two subscales, participation and attendance, which both have excellent reliability (for this study, Cronbach's alpha = .95 and .76, respectively), and convergent validity with insight in the original Tsang et al. study.

Objective attendance data was also obtained in the current study by tabulating the number of sessions attended.

Procedure

Prior to beginning treatment, participants were assessed using the PANSS, BCIS, and SFS. Participants were then randomly assigned to receive either group CBT or ST for 12 one-hour weekly sessions. Generally, each group was comprised of either one or two therapists and between 5 and 8 clients. If a group had less than 5 members, only one therapist was assigned in order to maintain comparable client-therapist ratios across groups. Prior to the 6th session of group therapy, clients were administered the WAI-G. After the final session, therapists completed the PTCS.

Treatments

Group CBT is a manual-based and structured intervention that uses psychoeducation and CBT techniques (e.g., self-monitoring, coping strategy enhancement) to reduce the distress associated with auditory hallucinations (Wykes et al., 1999). Group ST is a manual-based and non-directive intervention focusing on emotional support and counseling of non-symptom related problems (Penn et al., 2004). This treatment was offered to control for the non-specific effects of group CBT. The therapists included a clinical psychologist, a psychiatrist, and doctoral students in clinical psychology with the equivalent of at least a Masters degree in psychology. Therapists were randomly assigned to either group CBT or group ST and trained in the intervention via didactic presentations, directed readings, and role-playing conducted in the three months prior to the first group session. These therapists were kept blind to the hypotheses of this study. In addition, a clinical psychologist reviewed the audiotaped group therapy sessions and conducted weekly supervision with therapists to maintain treatment fidelity.

<div align="center">Results</div>

Data Analysis Overview

First, Pearson correlations were computed to examine the interrelationships among the predictor variables, and among the WAI total and subscales. Hierarchical linear modeling (HLM) was then used to evaluate the contributions of selected baseline client characteristics and group level characteristics to client-rated group alliance at the 6th session of group therapy. Next, the effect of treatment type (CBT versus ST) on group alliance and interaction with predictor variables were analyzed. Finally, correlations were computed to explore the relationship between group alliance, attendance, and treatment engagement.

Descriptive statistics

Descriptive statistics for the baseline client characteristics, mid-treatment group alliance (and subscales), and post-treatment therapeutic engagement are summarized in Table 2. Because of a positively skewed distribution of the variable "# of group sessions missed," a natural log transformation was performed in order to better approximate a normal distribution. The distribution of the activation factor from the PANSS was also positively skewed due to a floor effect.

Correlational analyses

Table 3 summarizes the correlations among the predictor variables. Higher autistic preoccupation on the PANSS was associated with higher activation on the PANSS. No other predictors were significantly associated with one another, indicating relative independence among the predictor set.

Pearson correlations were computed among the WAI-G subscales and total score. All of these variables were highly correlated with one another (range: .77-.95), therefore only the WAI-G total score will be used in subsequent analyses.

Hierarchical Linear Modeling

HLM was employed to account for non-independence due to the nested data structure of clients within groups (Raudenbush and Bryk, 2002). The intraclass correlations were computed and negative values indicated slight negative non-independence ($r = -.001$). This is not uncommon due to small group processes of differentiation sometimes known as the "boomerang effect" (Kenny et al., 2002). Therefore, the individual scores were treated as repeated measures in the group with a compound symmetry covariance structure, indicating there is no difference in the degree of non-independence between any pair of group members (Kenny et al., 2002).

In order to test the hypothesis that older age, lower activation and autistic preoccupation symptoms, greater insight, and higher social functioning would predict client-rated group alliance, multilevel models were estimated using a random effects regression analysis (see Table 4 for a summary of the results). We focused on only two group level predictors, insight and social functioning, because these variables are consistent predictors of therapeutic alliance among individuals with schizophrenia. Group level analyses allow for investigating the effects of other group member characteristics on an individual's group alliance. After controlling for the hypothesized predictor variables, the degree of correlation between residuals within groups was -.01.

The average level of insight within the group was a significant positive predictor of alliance [$t(7) = 3.66$, $p = .01$]. Autistic preoccupation approached statistical significance; lower ratings of autistic preoccupation predicted stronger group alliance [$t(43) = -1.91$, $p = .06$]. However, older age, lower activation, higher individual insight, and higher individual

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and group social functioning were not statistically significant predictors of group alliance. Overall, the hypothesized variables accounted for 18% of the variance in group alliance.

Follow up analyses examined whether treatment group (CBT or ST) had a main or interactive impact on group alliance. Analyses revealed that there was no main treatment group effect; thus, group alliance ratings were not different in CBT versus ST [$t(8) = .15$, $p = .89$]. In addition, there were no significant interactions between any of the predictor variables and treatment type.

Relationship with Treatment Engagement and Attendance

As a first step in examining the relationship between group alliance and treatment engagement, analyses were conducted to determine whether treatment group had a differential impact on attendance or treatment engagement (as measured by the PTCS). The results showed no significant group effects on the PTCS [participation: $t(58) = -.49$, $p = .63$; attendance: $t(58) = .29$, $p = .77$] or number of sessions missed [$t(56) = -.38$, $p = .71$]. Then, Pearson correlations were computed between group alliance, PTCS subscales, and number of sessions missed (log transformed). As displayed in Table 5, stronger group alliance was significantly associated with fewer sessions missed and higher ratings of treatment engagement on the PTCS.

Discussion

The primary purpose of this study was to investigate the client characteristics that predict group alliance among individuals with schizophrenia, and to investigate the relationship between group alliance and therapeutic engagement. To examine these issues, an existing measure of therapeutic alliance, the WAI, was modified for use in a group therapy context. The results showed that a higher level of average group insight predicted group

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alliance, which was consistent with the study's hypotheses. However, none of the other hypothesized variables (i.e., age, specific symptoms, insight, and social functioning) significantly predicted group alliance. Finally, stronger group alliance was related to fewer sessions missed and higher therapist ratings of treatment compliance. These findings are discussed in more detail below.

This study found that individuals reported a stronger alliance when they were members of groups with other clients high in insight. This is consistent with research on individual therapy and suggests that insight is an important predictor of therapeutic alliance, irrespective of treatment modality (Dunn et al., 2006; Svensson and Hansson, 1999). Insight may be associated with group alliance by increasing "universality." When many group members recognize their mistaken judgments, this may lead to feelings of closeness through sharing common experiences. Yalom (1995) designated universality as one of the therapeutic factors unique to group therapy and which has been rated as important to clients with severe mental illnesses (Crouch et al., 1994). In addition, clients who are low in insight have been found to have more difficulties getting along with others and behaving in a socially appropriate manner during a work treatment program (Lysaker et al., 1994). Therefore, groups high in insight may be more likely to have members who share agreement on the tasks and goals of therapy and who are interpersonally skilled, which facilitates group bonding.

Most of the other client characteristics predictive of the therapeutic alliance in individual therapy for clients with schizophrenia (i.e., age, symptoms, individual insight, social functioning) were not significant predictors of group alliance in this study. Autistic preoccupation did show a trend level negative association with group alliance, which is

consistent with findings from individual treatment of schizophrenia (Couture et al., 2006). However, the association was not statistically significant at traditional alpha (.05) levels, suggesting that this finding needs to be interpreted cautiously.

The hypothesis that a stronger group alliance would be associated with treatment engagement was supported. Clients who had stronger group alliance ratings missed fewer group therapy sessions and were rated as more engaged in therapy by therapists, indications of treatment compliance (Corrigan et al., 1990). This finding is consistent with previous research that found better attendance to be associated with stronger therapeutic alliance in both individual therapy (Frank and Gunderson, 1990) and group therapy (Johnson, in press). This finding is potentially important in light of the well-established "dose-response" effect observed in psychotherapy research; longer duration of treatment is associated with greater therapeutic change (Westen et al., 2004). As greater insight is associated with lower dropout rates, this suggests that group alliance might mediate the relationship between insight and attendance (Lysaker et al., 1994).

Findings from this study have important treatment implications with respect to group therapy for schizophrenia. First, the WAI-G is a reliable measure of group alliance in clients with schizophrenia, and ratings on this measure may have promise in predicting who will terminate treatment prematurely. Second, study results lend some preliminary support to the use of insight as a key factor in determining group composition. It seems that a client can form a stronger group alliance when placed in a group with members high in insight rather than low in insight. For example, a client will tend to bond more with others who are also self-reflective about unusual experiences and able to correct mistaken judgments. Even a client low in insight will likely rate alliance as stronger when he can benefit from processes

such as "interpersonal learning," whereby that client can gain insight through input from other group members high in insight (Yalom, 1995).

This study has some limitations that should be addressed in future research. First, therapeutic alliance in group therapy is composed of both individual and group alliance (Gillaspy et al., 2002). However, this study did not assess client-rated individual alliance and was therefore unable to directly compare how client characteristics differentially predicted individual and group alliance. In addition, future research should examine whether group or individual alliance more strongly predicts treatment engagement and outcome. Second, research on individual therapy with this population suggests that therapist-rated alliance is a stronger predictor of therapeutic outcome than client-rated alliance (Gehrs and Goering, 1994; Neale and Rosenheck, 1995). The current study, however, only assessed client-rated group alliance. And third, group alliance should be directly compared to other related constructs such as group cohesion and group climate to determine theoretical differences and overlap.

Conclusions

In sum, this study showed that clients with schizophrenia are more likely to form a strong therapeutic alliance in group therapy when there is a high average level of insight within the group. The findings also indicate that most of the hypothesized predictors of alliance in individual treatment of schizophrenia may not be applicable to a group format, with the exception of insight and possibly autistic-like symptoms. This may be due to the fact that individual and group therapy are viewed by many researchers to be distinct therapeutic approaches with related, but different, mechanisms of change (Kivlighan et al., 2000; Yalom, 1995). In addition, findings suggest that stronger group alliance is associated with better

treatment compliance and engagement.

Table 1

Participant Demographics

	N	%
Gender-Male	33	51
Ethnicity- Caucasian	36	55
African-American/Black	28	43
Hispanic	5	7
Diagnosis- Schizophrenia	32	49
	M	**SD**
Age	42.1	12
Education	12.7	1.5
IQ score (WASI)	93.7	6.4
Age at First Hospitalization	24.7	9.4
Total Hospitalizations	7.9	6.1

Table 2

Descriptive statistics for predictor and outcome variables, and therapeutic alliance

Predictor Variables (Baseline)	**Mean**	**SD**	**Min**	**Max**
Activation Factor (PANSS)[a]	4.87	1.66	4	13
Autistic Preoccupation Factor (PANSS)[a]	8.49	2.37	5	15
Insight (BIS)[a]	5.35	5.78	-10	21
Social Functioning (SFS)[a]	121.98	22.51	70	160
Therapeutic Alliance (6th Session)				
Group Alliance Total (WAIC-G)[b]	193.32	26.58	122	246
Task Scale (WAIC-G)[b]	66.13	9.49	43	84
Bond Scale (WAIC-G)[b]	63.12	9.92	34	83
Goal Scale (WAIC-G)[b]	64.08	9.03	45	84
Outcome Variables (12th Session)				
Participation (PTCS)[c]	47.00	9.15	23	60
Attendance (PTCS)[c]	18.99	4.22	6.5	25
# of Sessions Missed (log)[b]	1.14	.72	0	2.48

[a] n=63; [b] n=58; [c] n=60

Table 3

Intercorrelations among predictor variables

	Activation Factor	Autistic Preoccupation Factor	Insight	Social Functioning
Age	-.11 (*p*=.37)	.12 (*p*=.35)	.02 (*p*=.85)	-.08 (*p*=.51)
Activation Factor		.30 (*p*=.02)	-.02 (*p*=.85)	.12 (*p*=.35)
Autistic Preoccupation Factor			.12 (*p*=.40)	.05 (*p*=.69)
Insight				.11 (*p*=.39)

Table 4

Hypothesized Predictors of Group Alliance

Predictor	Estimate	Standard Error	df	*t*	*p*
Age	.005	.02	43	.19	.85
Activation Factor	1.91	1.80	43	1.06	.30
Autistic Preoccupation Factor	-2.62	1.37	43	-1.91	.06
Insight (individual)	-.18	.59	43	-.30	.76
Insight (group mean)	7.13	1.95	7	3.66	.01
Social Functioning (individual)	-.27	.17	43	-1.57	.12
Social Functioning (group mean)	-.56	.29	7	-1.92	.10

Table 5

Correlations between Group Alliance, PTCS, and Sessions Missed

	Attendance (PTCS)	Participation (PTCS)	# of Sessions Missed
Group Alliance (WAI-G)	.42 (*p* < .01)	.45 (*p* < .01)	-.45 (*p* <.01)
Attendance (PTCS)		.86 (*p* <.01)	-.76 (*p* < .01)
Participation (PTCS)			-.59 (*p* < .01)

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