RESEARCH ARTICLE

An investigation of the relationship between therapist characteristics and alliance in group therapy for individuals with treatment-resistant auditory hallucinations

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Abstract

Background: Alliance is a well-studied construct; however, little research has investigated predictors of alliance in a group context.
Aims: This study investigates the relationship between therapist characteristics and group alliance in 65 individuals with schizophrenia receiving outpatient group therapy for treatment-resistant auditory hallucinations.
Methods: Raters coded 120 sessions of cognitive behavioral therapy or supportive therapy for therapist warmth and friendliness, therapist exploration and negative therapist attitude. Alliance was assessed at week six.
Results: Higher average levels of therapist warmth and friendliness and lower average levels of negative therapist attitude in sessions one to five were associated with stronger alliance at week six at the trend level ($p < 0.10$). Therapist exploration did not predict alliance at week six. Higher negative therapist attitude at treatment engagement was associated with higher post-treatment symptom scores.
Conclusions: Our results suggest that therapist attributes but not therapist techniques are associated with client's perceptions of alliance and that negative therapist behaviors are associated with higher symptom levels at post-treatment. Implications for clinical practice are discussed.

Introduction

Conceptualized as the collaborative work and emotional bond between client(s) and therapist, alliance has been widely investigated as a factor linked to treatment outcomes (Elvins & Green, 2008). Meta-analyses have found a modest but consistent [ES = 0.22–0.26] relationship between alliance and outcome (Horvath & Symonds, 1991; Martin et al., 2000).

Among individuals with schizophrenia spectrum disorders, alliance has been associated with factors such as medication compliance and symptoms (Frank & Gunderson, 1990; Svensson & Hansson, 1999). Although these results are drawn from research on individual therapy, they highlight the importance of identifying factors related to alliance in group therapy, a modality which may increase the cost-effectiveness and availability of psychosocial treatments for schizophrenia; an important issue given the lack of therapists trained in these interventions and the lack of resources for individual treatment (Lecomte et al., 2008).

Group alliance is based on the same core factors as individual alliance and refers to the bond between an individual member and the group as whole, including the therapist (Yalom, 2005). It may be particularly important as clients in group therapy may place a greater emphasis on interpersonal factors (Holmes & Kivlighan, 2000). Group alliance has been related to outcome in samples with borderline personality disorder (Marziali et al., 1999), depression (Budman et al., 1989), and schizophrenia (Johnson et al., 2008).

Previous work has found that client characteristics, like symptoms (Wittorf et al., 2009) and cognitive factors (David & Lysaker, 2004), are related to individual alliance, however the amount of variance in alliance explained by client factors is moderate at best and many client factors are not easily altered (Wittorf et al., 2009). Thus, there is a need to identify malleable factors than can impact alliance. Previous research has shown that both therapist techniques, like exploration, and personal characteristics, like warmth, are related to alliance (reviewed in Ackerman & Hilsenroth, 2003) and may represent factors related to alliance that are changeable.

In samples of people with a psychotic disorder, individual alliance has been associated with the depth and smoothness of

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therapy sessions (Svensson & Hansson, 1999) and the level of therapist warmth and friendliness (Loneck et al., 2002). Yet, no study has investigated the relationship between therapists' in session behavior and characteristics and group alliance in this population.

The present study aimed to investigate the relationship between therapist characteristics and group alliance among individuals with schizophrenia experiencing treatment resistant auditory hallucinations, using the therapist warmth/friendliness, therapist exploration, and negative therapist attitude subscales of the Vanderbilt Psychotherapy Process Scale (VPPS). Based on previous research that suggests levels of alliance are increased by techniques such as exploration, as well as by personal characteristics, such as warmth (Ackerman & Hilsenroth, 2003), we hypothesized that: (1) Higher average levels of therapist warmth/friendliness in sessions one to five would predict stronger group alliance at week six; (2) lower average levels of negative therapist attitude, in sessions one to five, would predict stronger group alliance at week six and (3) higher average levels of therapist exploration, in the first five sessions, would predict stronger group alliance at week six.

In addition, a small number studies have also found that therapist characteristics are related to treatment outcomes (Bachelor, 1991; Loneck et al., 2002), thus the secondary aim of this study was to explore the relationship between therapist characteristics, client symptoms, and treatment engagement and attendance.

Methods

Participants

Participants ($N = 65$) were part of a randomized clinical trial comparing group Cognitive Behavioral Therapy (CBT) to Supportive Therapy (ST) for treatment-refractory auditory hallucinations (Penn et al., 2009). Participants ($N = 65$) met the following criteria: (1) DSM IV diagnosis of schizophrenia or schizoaffective disorder; (2) aged 18–65; (3) an IQ greater than 70; (4) no current substance dependence; (5) auditory hallucinations of at least moderate severity (i.e. a rating of at least ''4'' on the Positive and Negative Syndrome Scale (PANSS) hallucinations item) despite two pharmacological trials (either atypical neuroleptic or clozapine), for 8 weeks prior to randomization. Demographic data for the sample is summarized in Table 1.

Participants were then randomly assigned to receive either group CBT ($N = 32$) or ST ($N = 33$) in one-hour weekly sessions for 12 weeks. Therapists ($N = 10$) were randomly assigned to group CBT or group ST, and included a clinical psychologist, a psychiatrist, a social work graduate student and doctoral students in clinical psychology who had obtained a Masters in psychology or the equivalent.

Procedure

Trained research assistants coded a total of 116 sessions of group CBT or ST. Four sessions were not recorded due tape recorder malfunction. Scores for unrecorded sessions were calculated by averaging the score of the sessions immediately

Table 1. Participant demographics.

	N	%
Gender – Female	32	49
Ethnicity – Caucasian	34	52
Black	25	38
Hispanic	5	8
Not reported	1	2
Primary diagnosis – Schizophrenia	32	49
Schizoaffective	33	51
	M	SD
Age	42.1	12
Education	12.7	1.5
IQ score (WASI) (San Antonia, TX)	93.7	6.4
Reading level (WRAT)	95.3	14.6
Age first hospitalization	24.7	9.4
Total hospitalizations	7.9	6.1

before and after resulting in a total of 120 sessions available for analysis.

A total of five CBT groups and five ST groups were completed across five cohorts. Eight groups had co-therapists. Clients filled out the Group Working Alliance Inventory (WAI-G) before the sixth session of either CBT or ST and placed their ratings in sealed envelope. Levels of alliance assessed midway in treatment reflect the alliance formed in intial treatment engagement as well as the early stages of treatment. Measures of symptoms, social functioning and insight were obtained prior to treatment, at post-treatment and at 3 month follow-up.

Measures

Therapist characteristics and behaviors were assessed using the Vanderbilt Psychotherapy Process Scale (VPPS; O'Malley et al., 1983). As the current study was interested in therapist factors, only the 44 items pertaining to therapist characteristics were used. Items are rated on a five point Likert scale and correspond to three subscales: *Therapist Warmth and Friendliness* (TWF) assessing the level of therapist warmth and involvement with a client; *Negative Therapist Attitude* (NTA) assessing an intimidating or threatening attitude; and *Therapist Exploration* (TE) assessing attempts to explore reasons underlying feelings and behaviors (e.g. ''Tried to help the patient recognize his/her feelings''). Ratings for a random subset of tapes (5%) showed excellent inter-rater reliability (ICC = 0.92) and all subscales had Cronbach's alpha values equal or greater than 0.81. Scores for each therapist on each therapist factor were obtained for each coded session. Consistent with the idea of simultaneous participation and contribution of co-therapists to therapy (Yalom, 2005) scores for co-therapists were averaged for each dyad.

Group Alliance was assessed using the 36-item client version of the Group Working Alliance Inventory (WAI-G; Johnson et al., 2008). The WAI-G was created by modifying the WAI (Horvath & Greenberg, 1989), such that the client rated the relationship with the group as opposed to the therapist only. No changes were made to the 7-point Likert scale, or anchors. Total score was used with higher scores indicating better alliance. Cronbach's alpha for the total score was 0.92.

Symptoms were assessed using the PANSS (Kay et al., 1987), a semi-structured interview with sound psychometric properties that is commonly used to assess the symptoms of schizophrenia. A research assistant blind to treatment condition and who had been trained to adequate reliability (ICC > 0.80 with gold standard rater) administered the PANSS. Total score was used, with higher total scores corresponding to greater symptom severity.

Insight was assessed using the Beck Cognitive Insight Scale (BCIS; Beck et al., 2004), a self-report scale that assesses cognitive insight in individuals with psychosis. The BCIS is composed of two subscales, self-reflexiveness and self-certainty (for this study Cronbach's $\alpha = 0.63$ and 0.54, respectively). A composite Reflectiveness–Certainty Index (or R-C Index) score is computed with higher scores indicating greater cognitive insight.

Treatment engagement and attendance was measured with the Psychosocial Treatment Compliance Subscale (PTCS; Tsang et al., 2006), a 17-item, therapist-rated, Likert scale of compliance and treatment engagement designed for people with psychotic disorders. Both subscale scores were used, with treatment engagement operationalized as a participation score and attendance as an attendance score (Cronbach's $\alpha = 0.95$ and 0.76 respectively). Higher scores represent better treatment compliance.

The Social Functioning Scale (SFS; Birchwood et al., 1990) is a commonly used self-report measure of social and occupational functioning for individuals with schizophrenia. Total score was used in the current study with higher scores reflecting better social functioning, and Cronbach's alpha was 0.65.

Statistical analyses

Multiple linear regression analysis was conducted using PASW SPSS 18.0 (Chicago, IL). A single mean score for each therapist factor (TWF, TE and NTA) was obtained by averaging scores from sessions one to five. These were then entered into three respective models (one for each factor) to predict WAI-G score at session six. For the exploratory aims, we examined the relationship between therapist factors and outcome using the mean scores on therapist factors at treatment engagement (sessions 1–4), early treatment (sessions 5–8) and at the end of treatment (sessions 9–12) using post-treatment PANSS score, PTCS attendance score and PTCS participation score as the respective outcome variables. Pre-treatment symptom score, baseline level of social functioning, baseline level of insight and treatment condition were covariates in all models for both primary and secondary aims. These variables have been found to be linked to both alliance and outcome in previous work (Johnson et al., 2008). Alpha levels have not been adjusted for multiple comparisons. Effect sizes are correlational.

Results

Descriptive statistics

Descriptive statistics are summarized in Table 2. No significant differences were found between the CBT and ST groups on levels of group alliance $[t(56) = -0.043, p = 0.97]$.

Table 2. Descriptive statistics for predictor and outcome variables.

	Mean	SD	Min	Max
Covariates (Baseline)				
PANSS pre-treatment[a]	61.77	10.40	43	83
Insight (BCIS)[a]	5.20	5.82	−10	21
Social functioning (SFS)[a]	122.83	22.89	70	166
Therapist characteristics (across all sessions)				
Therapist warmth and friendliness (TWF)[a]	27.55	1.35	26.00	31.25
Therapist exploration (TE)[a]	35.62	1.84	33.25	39.04
Negative therapist attitude (NTA)[a]	6.36	0.17	6.13	6.67
Outcome variables				
Working alliance (WAI-G)[b]	193.12	26.73	122	246
PANSS post-treatment [c]	57.11	10.40	38	83
Participation (PTCS)[d]	47.00	9.15	23	60
Attendance (PTCS)[d]	18.99	4.22	6.5	25

[a]$n = 65$; [b]$n = 58$; [c]$n = 60$ [d]$n = 60$.

Table 3. Predicting group alliance.

	Model R^2	B	SE(B)	t	p
Therapist warmth and friendliness (TWF) model 1					
Model R^2	0.182				0.051
Mean TWF sessions 1–5		4.43	2.36	1.88	0.06**
Social functioning		−0.445	0.160	−2.78	0.008*
Pre-treatment PANSS		−0.951	0.386	−2.46	0.017*
Therapist exploration (TE) model 2					
Model R^2	0.132				0.18
Mean TE sessions 1–5		1.07	1.78	0.60	0.55
Social functioning		−0.395	0.163	−2.42	0.02*
Pre-treatment PANSS		−0.630	0.352	−1.79	0.08**
Negative therapist attitude (NTA) model 3					
Model R^2	0.186				0.052
Mean NTA sessions 1–5		−22.15	11.36	−1.95	0.51**
Social functioning		−0.475	0.162	−2.92	0.029*
Pre-treatment PANSS		−0.791	0.351	−2.25	0.005*

*Significant at $p = 0.05$.
**Significant at $p = 0.10$.

All variables included in analyses were found to satisfy the assumption of normality required for regression analysis.

Therapist warmth and friendliness related to alliance

The model R^2 was significantly greater than zero, $(F(5, 57) = 2.31, p = 0.051, R^2 = 0.18)$, corresponding to an effect size (ES) of 0.22. The regression weight for average TWF from sessions 1–5 approached significance ($p = 0.06$, 95% CI = −0.300–9.169) (Table 3). After controlling for covariates, individuals who had higher PANSS and SFS scores at baseline had lower group alliance ratings at week six. The association between lower SFS and higher alliance may appear counterintuitive and may indicate that individuals who have a impoverished social network are particularly open to forming an alliance or that those with higher baseline SFS scores may find it difficult to form an alliance with those perceived as less socially skilled.

Negative therapist attitude and alliance

The model $(R^2 = 0.19, F(5,57) = 2.37$ $p = 0.052$, ES $= 0.23)$ corresponded to a small to moderate effect (Cohen, 1988). The regression weight for NTA approached significance

($p = 0.053$, 95% CI $= -44.947$ to 0.644), indicating that higher average levels of negative therapist attitude in sessions 1–5 may be associated with lower alliance ratings at week six. Higher levels of symptoms at baseline, and higher social functioning at baseline were significantly associated with lower group alliance ratings at week six, after controlling for the other variables in the model.

Therapist exploration and alliance

The model was not statistically significant ($R^2 = 0.132$, $F(5,57) = 1.582$, $p = 0.18$), indicating that average TE from sessions 1–5 did not predict alliance ratings at week 6.

Therapist characteristics and post-treatment symptom scores

Mean TWF scores for sessions 1–4 (Engagement), sessions 5–8 (Early Treatment) and sessions 9–12 (End Treatment) were entered into three exploratory models. All models were statistically significant, however, pre-treatment PANSS score was the only significant predictor of post-treatment symptoms. Mean TE scores for sessions 1–4 (Engagement), sessions 5–8 (Early Treatment) and sessions 9–12 were entered into three exploratory models. All models were significant, and again pre-treatment PANSS score was the sole significant predictor of post-treatment symptoms, indicating that individuals with higher symptom levels at baseline are expected to have higher symptom levels at post-treatment.

Mean NTA scores for sessions 1–4 (Engagement), sessions 5–8 (Early Treatment) and sessions 9–12 were entered into three exploratory models. All models were significant, with pre-treatment PANSS scores predicting post-treatment PANSS scores. Mean NTA score at treatment engagement (sessions 1–4) also predicted post-treatment PANSS scores ($p = 0.02$), indicating individuals whose therapists exhibited a higher average level of negative attitudes in sessions 1–4 had higher levels of post-treatment symptoms.

Therapist characteristics and treatment engagement and attendance

None of the overall models were significant indicating that therapist characteristics were not predictive of treatment engagement or attendance in this sample.

Discussion

Higher average levels of therapist warmth and friendliness in sessions 1–5 were associated with higher ratings of group alliance at week six (at trend, $p < 0.10$), underscoring previous work that suggests therapist warmth and empathy are particularly important to client's perception of alliance (Bachelor, 1995).

We failed to find a relationship between average therapist exploration and alliance. This could be due to differences between individual and group therapy or sample differences. Previous research has focused on individual therapy with non-psychotic populations, thus it is possible that the relationship found between therapist exploration and alliance

in other populations does not exist in populations with schizophrenia.

We also found trend level results ($p < 0.10$) suggesting higher average levels of negative therapist attitudes sessions one to five are associated with lower alliance ratings. This is supported by the group therapy literature (Yalom, 2005), which suggests that the therapist's task is to shape group norms. Displays of negative attitude from the therapist in the early sessions may have affected group norms and worked against the formation of a strong therapeutic alliance.

The association found between average NTA during treatment engagement and post-treatment symptoms, is consistent with research on expressed emotion (EE), a construct including similar dimensions of behavior (e.g. expressions of hostility). Higher EE in mental health workers has been linked to poorer outcomes in individuals with schizophrenia (Solomon et al., 2010). The impact of negative therapist attitudes may be indirect, Clarke & Kissane (2002) propose that negative beliefs and attitudes from caregivers may contribute to clients feeling discouraged and hopeless regarding treatment, leading to increased symptoms among individuals with schizophrenia (Lysaker et al., 1995).

The finding that only NTA was related to outcome is inconsistent with the small number of studies that found an association between therapist variables (TWF, TE) and outcomes (Bachelor, 1991; Loneck at al., 2002). The failure to find an association between any therapist characteristics and participation and attendance, could reflect that some group members were provided with transportation to group or that the decision to attend or participate was influenced by other factors, like desiring to interact with others, rather than therapists' characteristics.

This study has several limitations. First, due to the small number of therapists, we were unable to account for the nesting of individuals within therapists. While it is desirable to examine therapist effects formally as the current data is drawn from a treatment trial and not designed to examine therapist effects specficially, formal analyses of these effects would be significantly underpowered. Thus, we cannot rule out the possibility that the effects observed are due not to therapist characteristics but to group level processes. Future research should attempt to parse out therapist effects directly by including this as a target during the trial design. Second, by averaging the scores for therapist dyads, significant variability may have been lost in therapist behaviors, which could have affected the standard deviations of VPPS scores and may explain our failure to find relationships between TE and alliance, and therapist characteristics and attendance/participation. Third, the use of audiotaped sessions did not allow raters to incorporate non-verbal therapist behaviors into ratings. The range of values for NTA scores was also much smaller than TWF or TE, which could be reflective of a floor effect as the therapists in this study were well-monitored and trained and likely exhibited few negative attitudes.

Despite these limitations, our results suggest that therapist attributes (warmth, negative attitude), but not techniques (exploration) are related to client's perceptions of alliance. Importantly, therapist attitudes are malleable and thus may be modified through education, client feedback or supervision. Clinicians working with individuals with psychotic disorders

in a group setting can foster alliance by minimizing negative attitudes, such as being judgmental, and maximizing displays of warmth and friendliness. Overall, the results of this study contribute to the understanding of how non-specific factors may influence perceptions of alliance and outcomes in groups, an area that has been traditionally understudied in populations with psychotic disorders (Bentall et al., 2003). Therapists working with this population should be encouraged to monitor and reflect on their in session behavior as they may influence the alliance forged between them and group members.

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Decloarationt of interest

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