

Client Predictors of the Therapeutic Alliance in Individual Resiliency Training

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### Abstract

Individuals with first episode psychosis (FEP) are often reluctant to seek treatment, resulting in difficulties with engagement and high dropout rates. The therapeutic alliance (TA), the affective and collaborative bond between therapist and client, is predictive of better treatment outcomes for clients with FEP; thus, it is valuable to study the predictors of the TA to elucidate how best to foster a positive alliance with these individuals. The current study examined whether baseline client characteristics including severity of symptoms, social functioning, duration of untreated psychosis, and demographic factors (age, race), were associated with the TA. The sample included clients who received Individual Resiliency Training (IRT) as part of the NAVIGATE treatment in the NIMH Recovery After An Initial Schizophrenia Episode Early Treatment Program study. Subjects ( $n=146$ ) were assigned to a trained IRT therapist, and sessions were audio recorded. Four undergraduate students were trained in using the Vanderbilt Therapeutic Alliance Scale to rate the TA between client and therapist for audiotapes of session 3 of IRT. Multilevel modeling was utilized given the nested data structure. Results indicated a significant positive relationship between positive symptoms and the TA, a significant negative relationship between negative and excitative symptoms and the TA, and a significant positive relationship between age and the TA. Results suggest that treatment providers working with FEP clients should take into consideration the clients' symptom severity and age when beginning therapy, and adaptations to treatment should be made to foster a better TA in hopes of achieving better engagement and treatment outcomes.

*Keywords:* first episode psychosis; early intervention; schizophrenia; symptom severity; age

### Client Predictors of the Therapeutic Alliance in Individual Resiliency Training

Schizophrenia, although varying in presentation among individuals, is characterized by delusions, hallucinations, disorganized speech or behavior, and depleted emotional expression (DSM-5; American Psychiatric Association, 2013) and is associated with impairment in social, cognitive, and occupational functioning (Breier, Schreiber, Dyer, & Pickar, 1991; Marder & Fenton, 2004). Research indicates that long-term treatment outcomes are most promising if treatment is received within the first five years of the illness; therefore, treatment programs targeting individuals with first episode psychosis (FEP) are critical (Malla, Norman, & Joober, 2005). Unfortunately, people with FEP are often reluctant to seek treatment, resulting in difficulties in engaging these clients in therapy and high dropout rates (Malla et al., 2005). Disengagement rates are approximately 30% among FEP clients (Doyle et al., 2014), which indicates a serious need to identify strategies to effectively engage and maintain these individuals in treatment.

### **The Therapeutic Alliance**

The therapeutic alliance (TA), defined as a “collaborative and affective bond between therapist and patient” (Martin, Garske, & Davis, 2000, p. 438), comprises three factors: goals, tasks, and bond (Bordin, 1979). A positive TA occurs when the client and therapist agree on the goals of the session and the planned approach to achieve these goals (i.e., tasks) in the presence of a supportive and trustworthy bond (Bordin, 1979). The TA is an important construct to consider when targeting engagement (O’Brien, Fahmy, & Singh, 2008) and has shown to be predictive of better service adherence in an FEP population (Lecomte et al., 2008). In addition, Goldsmith, Lewis, Dunn, and Bentall (2015) found that increased attendance to therapy sessions paired with a negative TA led to detrimental effects on the clients’ symptoms. But, when the TA

ratings were positive, increased attendance to therapy led to improved symptoms (Goldsmith et al., 2015).

### **Potential Predictors of the TA: An Overview**

Because the TA is an important factor in treatment outcome for FEP clients (Goldsmith et al., 2015; Lecomte et al., 2008; O'Brien et al., 2008), it is valuable to study its predictors to elucidate how best to foster a positive alliance. In the current study, the potential predictors investigated are symptom severity, social functioning, duration of untreated psychosis (DUP), and demographic factors. Although there is limited research on symptom severity as a predictor of the TA in FEP (Bourdeau, Th  roux, & Lecomte, 2009; Johansen, Iverson, Melle, & Hestad, 2013; Melau et al., 2015), there is a substantial amount of evidence that symptom severity is associated with the TA in chronic schizophrenia (Couture et al., 2006; Johnson, Penn, Bauer, Meyer, & Evans, 2008; Jung, Wiesjahn, & Lincoln, 2014; Lysaker, Davis, Buck, Outcalt, & Ringer, 2011; McCabe & Priebe, 2003; McCabe & Priebe, 2004; Svensson & Hansson, 1999; Wittorf et al., 2009). Evidence suggests that social functioning is related to the TA within non-psychotic samples (Gibbons et al., 2003; Hersoug, Monsen, Havik, & Hoglend, 2002; Saunders, 2001), chronic schizophrenia samples (Catty et al., 2011; Couture et al., 2006; Johnson et al., 2008), and FEP samples (Bourdeau et al., 2009; Melau et al., 2015). DUP has not been examined as a predictor of the TA; however, DUP is an important predictor of treatment engagement (Doyle et al., 2014) and treatment outcome (Harris et al., 2005; Kane et al., 2016; Marshall et al., 2005; Penttil  , J   skel  inen, Hirvonen, Isohanni, & Miettunen, 2014; Perkins, Gu, Boteva, & Lieberman, 2005) in this population. Further, demographic factors including age and race were chosen as exploratory measures; however, research indicates that age is a potential predictor of engagement (Anderson, Fuhrer, Schmitz, and Malla, 2013; Haddock et al., 2006; Johansen et al.,

2013) and race is a potential predictor of the TA and engagement for those with psychosis and other mental health disorders (Anderson et al., 2013; Barrowclough, Meier, Beardmore, & Emsley, 2010; Snowden, 2001; Wintersteen, Mesinger, and Diamond, 2005).

### **Symptom Severity**

Symptom severity has been linked to significant treatment outcomes in FEP including medication adherence (Lecomte et al., 2008), disengagement (Doyle et al., 2014) and recovery (Austin et al., 2013). There is some inconsistency, however, in whether symptoms are predictive of the TA. Within chronic schizophrenia, some studies indicate that symptoms do serve as significant predictors of the TA (Couture et al., 2006; Johnson et al., 2008; Jung et al., 2014; Lysaker, et al., 2011; McCabe & Priebe, 2003; McCabe & Priebe, 2004; Svensson & Hansson, 1999; Wittorf et al., 2009), whereas others do not (Barrowclough et al., 2010; Catty et al., 2011; Evan-Jones, Peters, & Barker, 2009).

The majority of research in chronic schizophrenia has found a negative relationship between symptoms and alliance, such that a higher severity of symptoms is associated with a poorer TA (Couture et al., 2006; Johnson et al., 2008; Jung et al., 2014; Lysaker et al., 2011; McCabe & Priebe, 2003; McCabe & Priebe, 2004; Wittorf et al., 2009). Specifically, Jung and colleagues (2014) found that higher levels of negative symptoms were associated with a poorer rating of the TA. They suggest that negative symptoms give clients a decreased ability to show verbal and emotional reactions within the therapeutic relationship, potentially leading the therapist to perceive the relationship as negative (Jung et al., 2014). Another study found that less severe positive and negative symptoms were associated with a better therapist-rated alliance; it also suggested that therapists view positive symptoms, such as paranoid thinking and mistrust, as factors contributing to a poor therapeutic relationship (Wittorf et al., 2009). Further, Lysaker

and colleagues (2011) found that lower levels of positive, negative, and disorganized symptoms were associated with higher client-rated alliances while only lower levels of disorganized symptoms were associated with higher therapist-rated alliance. When examining specific factors of the five-factor solution of the Positive and Negative Syndrome Scale (PANSS), research shows that lower ratings on the autistic preoccupation factor (i.e., disturbance in volition and psychomotor retardation; Couture et al., 2006; Johnson et al., 2008) and the activation factor (i.e., hostility and uncooperativeness; Couture et al., 2006) were significantly correlated with a better therapist-rated alliance.

A smaller number of studies have not supported symptoms as significant predictors of the TA. Contrary to Couture et al. (2006) and Johnson et al. (2008), Barrowclough et al. (2010) did not find a significant relationship between the autistic preoccupation and activation factors of the PANSS and the TA. However, because participants in this study also had substance abuse disorders, the findings may not be comparable to the previous studies. Additionally, in a study of vocational rehabilitation for individuals with psychosis, Catty and colleagues (2011) did not find a significant relationship between symptoms and the TA.

Research on symptoms as predictors of the TA specifically within FEP is scarce compared to the research in people with chronic schizophrenia. One study reported that insight, medication side effects, and interpersonal factors such as friends and leisure activities, accounted for 22% of the variance in the TA in FEP (Bourdeau, et al., 2009). Although Bourdeau and colleagues (2009) failed to identify symptoms as predictors of the TA, they described that having fewer friends and leisure activities could represent consequences of negative symptoms. Another study found that an increased excitative factor of the PANSS—comprised of excitement, hostility, uncooperativeness, and poor impulse control—was associated with lower client-rated

alliance (Johansen et al., 2013). Johansen and colleagues (2013) suggested that increased excitement, hostility, uncooperativeness, and poor impulse control could prevent the establishment of a positive TA. However, this study did not support positive or negative symptoms as predictors of the TA (Johansen et al., 2013). In a large FEP study of 400 clients that investigated the working alliance between client and case manager, researchers found that fewer negative symptoms and disorganized symptoms were associated with a better working alliance (Melau et al., 2015). While evidence from chronic schizophrenia populations suggests there is a relationship between symptom severity and the TA, research on symptom severity and the TA within FEP remains unclear given the mixed results.

### **Social Functioning**

Social functioning deficits are present in FEP and can be comparable to deficits within chronic schizophrenia (Grant, Addington, Addington, & Konnert, 2001; Priebe, Roeder-Wanner, Kaiser, 2000). Evidence suggests that baseline social functioning could be a predictor of the TA. In non-psychotic samples, worse social functioning and interpersonal problems were associated with negative TA ratings (Gibbons et al., 2003; Hersoug et al., 2002; Saunders, 2001). In a sample that excluded people with psychosis, Hersoug and colleagues (2002) found that the quantity and quality of social relationships positively predicted patient-rated TA. Additionally, interpersonal problems such as being hostile-dominant or overly detached have been associated with a worse TA in non-psychotic samples (Gibbons et al., 2003; Saunders, 2001).

Within chronic schizophrenia, Couture and colleagues (2006) found that at week five of treatment, baseline social functioning was associated with a poorer therapist-rated TA. Similarly, in a vocational rehabilitation program for individuals with psychotic disorders, Catty and colleagues (2011) found that better baseline social functioning was associated with a better TA.



Further, Svensson and Hansson (1999) found that clients with a higher quantity of social relationships in the past year before admission had a better therapist-rated alliance. But, Johnson and colleagues (2008) found that a lower level of social functioning predicted a stronger group alliance in group therapy for individuals with treatment resistant auditory hallucinations. Johnson and colleagues (2008) suggest that individuals with lower levels of social functioning may have more motivation to form an alliance with the group because of their lack of outside social networks. Within FEP, Bourdeau and colleagues (2009) found that a portion of the variance in the TA was accounted for by interpersonal factors such as having friends. While this is not a comprehensive measure of social functioning, having friends is a possible outcome of having better social functioning. In addition, Melau and colleagues (2015) found that a better working alliance between case manager and client was associated with better social functioning in clients. Because social functioning deficits are prominent within FEP and have been demonstrated to predict the TA in schizophrenia samples, it is beneficial to study social functioning as a predictor of the TA within FEP.

### **Duration of Untreated Psychosis**

Another potential predictor of the TA, DUP, is defined as the time of manifestation of the first psychotic symptoms to initiation of treatment (Marshall et al., 2005). DUP has not yet been examined as a predictor of the TA in FEP; however, there is evidence that longer DUP is associated with poorer treatment outcomes in patients with FEP including disengagement (Doyle et al., 2014), lower likelihood of remission (Marshall et al., 2005; Penttilä, et al., 2014), and reduced symptomatic and functional recovery (Penttilä et al., 2014; Perkins et al., 2005). One study found that decreased severity of positive symptoms, increased social functioning, and better quality of life were all associated with a shorter DUP in an 8 year follow-up of FEP clients

(Harris et al., 2005). Further, the largest U.S. study to examine specialized treatment for FEP, found that participants with a DUP of  $\leq 74$  weeks had greater improvement in quality of life and psychopathology following two years of treatment than those with a DUP of  $>74$  weeks (Kane et al., 2016). Given the evidence indicating DUP has a significant impact on treatment outcome and engagement in FEP, it would be valuable to examine its relationship with the TA.

### **Demographic Factors**

Client demographics including age and race may also serve as predictors of the TA. Regarding age, FEP is most prevalent among young adults and adolescents (Malla et al., 2005). Haddock et al. (2006) found that age significantly impacted the level of engagement in therapy such that therapists rated participants 21 years old or younger as significantly more difficult to engage in therapy as compared to participants greater than 21 years old. In addition, Johansen and colleagues (2013) found that older clients with FEP reported higher levels of agreement with the therapist on the goals and tasks of the treatment. However, Anderson and colleagues (2013) found that older clients were at an increased risk of disengagement in an FEP early intervention program. Because age predicts significant differences in treatment engagement among clients, age may also impact the strength of the TA.

Regarding race, Wintersteen and colleagues (2005) investigated race matching between client and therapist in adolescents with substance abuse problems. Therapists rated significantly lower alliances when their client was of a different race. Further, when therapists and clients were matched, there were significantly higher retention rates (Wintersteen et al., 2005).

Barrowclough and colleagues (2010) found that the client's race was a significant predictor of the therapists' TA ratings in a sample of people with comorbid substance abuse and psychosis. In addition, research indicates that African-American clients have an increased risk of

disengagement as compared to White clients in FEP (Anderson et al., 2013) and across mental health disorders (Snowden, 2001). Because research suggests that race contributes to the level of the TA and engagement across mental health disorders and specifically within psychosis, it is beneficial to examine whether client race impacts the TA within FEP.

### **The Current Study**

The current study will focus on the four types of client characteristics outlined above as predictors of therapeutic alliance—severity of symptoms, social functioning, DUP, and demographics including age and race—within Individual Resiliency Training (IRT). The data are collected from the NIMH Recovery After an Initial Schizophrenia Episode Early Treatment Program (RAISE ETP), a multi-site randomized controlled trial comparing a multi-component, team-based treatment program (NAVIGATE) to treatment as usual in community mental health centers across the United States for FEP clients (Kane et al., 2016). IRT is the standardized, module-based individual therapy included in NAVIGATE, and uses aspects from two empirically supported interventions: Illness Management and Recovery (IMR) and Graduated Recovery Intervention Program (GRIP; Meyer, Gottlieb, Penn, Mueser, & Gingerich, 2015).

**Aims.** The purpose of the current study was to examine predictors of the TA within this sample of FEP clients to better understand ways of improving FEP recovery and treatment outcome. Research indicates that alliance ratings within the first five sessions predict symptomatic outcome in non-psychotic samples (Elvins & Green, 2008). Further, Horvath and Luborsky (1993) suggest that early alliance is most predictive of outcome as compared to middle or averaged ratings; therefore, only early alliance ratings (taken at session 3) in the IRT program were used for the current study. The aims and hypotheses of the current study are the following:

1. To examine whether baseline symptoms significantly predict TA ratings in IRT. I hypothesized that more severe symptoms would be associated with poorer TA ratings.
2. To examine whether baseline social skills significantly predicts TA ratings in IRT. I hypothesized that worse social functioning would be associated with poorer TA ratings.
3. To examine whether client age, race, and DUP significantly predict TA ratings in IRT. Given the limited research examining these factors in the context of the TA, this aim was considered exploratory.

## **Method**

### **Participants**

The NIMH RAISE Early Treatment Program took place across 34 community health treatment centers in 21 states selected through a national search. RAISE ETP utilized a cluster-randomization design such that 17 clinics provided NAVIGATE and 17 clinics provided Community Care.

A total of 223 participants (out of a total of 404) received NAVIGATE in RAISE ETP. Inclusion criteria for participants consisted of DSM-IV diagnoses of schizophrenia, schizoaffective disorder, schizophreniform disorder, brief psychotic disorder, or psychotic disorder not otherwise specified. Exclusion criteria included diagnoses of affective psychosis, substance-induced psychosis, and psychosis due to other medical conditions such as head trauma. The participants only experienced one psychotic episode in their lifetime. In the present study, participants were eligible for inclusion if they had received at least 3 sessions of IRT (n=189) given that the TA is thought to develop over time. Moreover, since the TA was rated via audiotaped sessions, participants must have had session three audiotaped. If session three was

not taped, session 4 or 5 was used as a replacement. Finally, clients were assigned to one IRT therapist; however, if a therapist was sick or on vacation, a different certified IRT therapist conducted the scheduled IRT session (if possible). Only sessions conducted by the primary IRT therapist were included in analyses. The present study sample included 146 participants (See Table 1 for demographic and clinical characteristics of the sample).

Thirty-six therapists at 17 sites provided IRT treatment in this study. Therapists received training in IRT delivery and were monitored for fidelity to treatment throughout the RAISE ETP study (See Browne et al., 2016 for details on fidelity monitoring).

### **Treatment**

NAVIGATE comprised medication management, family psychoeducation, IRT, and supported employment and education. Given that the present study examined the TA in IRT, this treatment is described below in more detail.

**IRT.** IRT draws from cognitive-behavioral therapy for psychosis combined with shared-decision making, goal setting, psychoeducation, and strengths-based components (Meyer et al., 2015). IRT was designed for FEP clients and utilizes strategies to help combat stigmatization, process their first episode of psychosis, and develop relapse prevention plans. IRT comprises 14 modules, seven of which are part of the core curriculum, while the other seven are additional topics used based on their relevance to the client's concerns. Examples of the core curriculum include education about psychosis and relapse prevention planning, whereas examples of the individualized modules include coping with symptoms and substance use. Each module comes with handouts for the client to follow along with and clinician guidelines equipped with tips and recommendations for how to run the session (Meyer et al., 2015).

### **Measures**

**Symptoms.** The Positive and Negative Syndrome Scale (PANSS; Kay, Fiszbein, & Opler, 1987), a semi-structured interview, was used to assess the severity of symptoms in participants. The PANSS consists of 30 items rated on a 7-point scale (1 = absent, 2 = minimal, 3 = mild, 4 = moderate, 5 = moderate-severe, 6 = severe, 7 = extreme) designed to assess severity of symptoms in schizophrenia populations. Items consist of detailed descriptions of core symptoms for positive symptoms, negative symptoms, and general psychopathology. A total score and five factor scores are produced: Positive, Negative, Disorganized/Concrete, Excitatory, and Depressive (Wallwork, Fortgang, Hashimoto, Weinberger, & Dickinson, 2012). Trained interviewers using live, two-way video conferencing administered this measure.

**Social functioning.** Because a formal social functioning measure was not included in RAISE ETP, the current study used the total score of one subscale of the Quality of Life Scale (QLS; Heinrichs, Hanlon, & Carpenter, 1984)—interpersonal relations (items 1-8; See Appendix)—as this subscale has been related to objective measures of social skill (Bellack, Morrison, Wixted, & Mueser, 1990), and assesses the quality of and capacity to form social relationships. The QLS consists of 21 items on a 6-point scale divided into 4 subscales—interpersonal relations, instrumental role, intrapsychic foundations, and common objects and activities, and was rated from a semi-structured interview by a trained interviewer.

**Therapeutic alliance.** The short form of the revised Vanderbilt Therapeutic Alliance Scale (VTAS-R Short Form; Shelef & Diamond, 2008) was used to assess the TA between client and therapist. The VTAS-R Short Form, an observer-rated scale, includes five items that best assess the TA through goals, bonds, and tasks in the therapy session. The current study is the first to use an observer-rated scale to measure the TA within FEP. Although in some cases client and therapist-rated scales are more feasible (Elvins & Green, 2008), the use of observer-rated scales

can help mitigate potential biases that may exist with client and therapist-rated alliance (Elvins & Green, 2008; Shelef & Diamond, 2008). For example, therapist and client experiences of the alliance are often subjective such that the client's perception of the therapist's warmth or genuine attitude may influence their alliance ratings and vice versa (Eugster & Wampold, 1996). Further, therapists' alliance ratings have shown significantly poorer predictions of outcome as compared to clients' or observer's ratings (Horvath et al., 1993). The VTAS-R Short Form consists of 5 items on a 6-point Likert-type scale ranging from 0 (not at all) to 5 (a great deal). The current study used the total score across the five items with item three reverse scored (See Appendix). The VTAS-R Short Form demonstrated adequate internal consistency in the present study ( $\alpha = .841$ ).

### **Procedure**

**RAISE ETP.** Individuals receiving NAVIGATE in the RAISE ETP study participated in at least one of its components (medication management, family psychoeducation, IRT, and supported employment and education), and could start or stop a program at any time (Meyer et al., 2015). All participants were offered treatment for at least two years. Each NAVIGATE treatment team received training in team-based FEP interventions.

**TA rating procedure.** Four undergraduate students were trained in using the VTAS-R Short Form to rate the TA. The raters received 15-22 hours of training, which consisted of listening to audio-recorded therapy sessions, rating them independently, and meeting as a group to discuss ratings. After training, intraclass correlations (ICCs) were calculated between each rater and the gold-standard rater as well as among all active raters. All ICCs were acceptable ( $\geq .7$ ). After establishing reliability, the raters were randomly assigned to rate IRT sessions independently. To manage rater drift, a second rater and the gold-standard rater also rated 10%

of each individual rater's sessions. If ICCs were acceptable ( $\geq .7$ ), scores from the original rater were used in analyses. If ratings were discrepant ( $ICC < .7$ ), the raters met as a group with the gold standard rater to address discrepancies and come to a consensus on the accurate rating. Consensus ratings were then utilized in place of original ratings. All ICCs were  $\geq .7$  suggesting that rater drift did not occur in the present study.

### **Data Analysis**

Multilevel modeling (Sniiders & Bosker, 1999) was utilized given the nested structure of these data (clients nested within therapists nested within sites). All analyses were conducted using SAS (version 9.3). For the purpose of this study, the dependent variable was the total TA rating from session three of IRT. Prior to fitting a model with all predictors, we fit a three-level unconditional model where the TA was entered as the dependent variable and random intercepts were included at the therapist and site levels. However, because the therapist random effect went to zero (i.e., the estimated variance at this level of the model went to zero), we refit the models without this random effect.

We utilized a model-building strategy similar to that used in prior research (Jung et al., 2014) in which we added predictors in groups based on theoretical rationale. Specifically, model one was the unconditional model (intercept only), model two included symptoms (5 factors of the PANSS), model three included symptoms (5 factors of the PANSS) and social functioning (QLS Interpersonal Relations), and model four included all predictors (5 factors of the PANSS, social functioning, DUP, age, and race). Race was recoded as a binary variable for these analyses (White vs. Non-white) given the limited number of individuals comprising racial groups other than African-American and White. A random intercept was included at the site level (therapist random effect was removed for all models as it went to zero). We calculated the



proportion of variance in the TA that was explained by predictors by comparing the residual variance estimate from model four (with all predictors) to that of model one (intercept only). Finally, bivariate Pearson correlations were computed to assess the relationship between all continuous predictor variables.

## Results

### Predictors of Therapeutic Alliance

The results revealed that when symptom factors from the 5-factor solution of the PANSS were added to model 2 as the sole predictors, three factors—positive symptoms ( $t(137) = 2.91, p = 0.004$ ), negative symptoms ( $t(138) = -3.49, p = 0.0007$ ), and excitative symptoms ( $t(137) = -3.02, p = 0.003$ )—were significant predictors of the TA (Table 2). These factors remained significant when social functioning was added in model 3 (positive:  $t(137) = 2.91, p = 0.0043$ ; negative:  $t(138) = -3.49, p = 0.0007$ ; excitative:  $t(137) = -3.02, p = 0.0030$ ); however, social functioning was not a significant predictor. Positive ( $t(134) = 2.47, p = 0.0146$ ), negative ( $t(135) = -3.46, p = 0.0007$ ) and excitative symptoms ( $t(135) = -2.65, p = 0.009$ ) remained significant predictors of the TA in the final model (model 4), which included all predictors. In addition, when age, race, and DUP were added to model 4, age was a significant predictor ( $t(132) = 2.34, p = 0.02$ ). Race, DUP, and social functioning were not significant predictors of the TA. Baseline symptom severity, social functioning, DUP, age, and race accounted for 18.2% of the variance in the TA among individual clients.

Bivariate correlations revealed small-to-moderate significant positive relationships between DUP and 3 factors of the PANSS: positive symptoms, excitative symptoms, and depressive symptoms. This suggests that longer DUP was related to more severe positive, excitative, and depressive symptoms. In addition, analyses revealed a small significant negative

relationship between the QLS-Interpersonal Relations subscale and positive symptoms and a moderate significant negative relationship with negative symptoms and disorganized/concrete symptoms. These findings suggest that better social functioning was related to less severe positive, negative, and disorganized/concrete symptoms. Finally, there was a small significant negative association between age and disorganized symptoms and a small-to-moderate positive relationship between age and DUP suggesting that older clients had less severe disorganized symptoms and longer DUP (Table 3).

### **Discussion**

The current study investigated predictors of the TA among individuals with FEP. The hypotheses were partially supported. Specifically, more severe negative and excited symptoms were related to a worse alliance; however, more severe positive symptoms were related to a better TA. In terms of social functioning and demographic predictors (aims 2 and 3), only age was a significant predictor of the TA such that older age was associated with a better TA. Social functioning, race, and DUP were not significantly associated with TA ratings.

### **Severity of Symptoms and Therapeutic Alliance**

**Positive symptoms.** Contrary to our findings, previous research within chronic schizophrenia has found that higher severity of positive symptoms was related to a worse TA (Lysaker et al., 2011; Wittorf et al., 2009) or that positive symptoms were not related to the TA at all (Jung et al., 2014). Within FEP, previous research suggests positive symptoms are not related to the TA (Bordeau et al., 2009; Johansen et al., 2013; Melau et al., 2015). However, one prior study found that higher severity of symptoms in chronic schizophrenia, as rated by the Hopkin's Symptom Check-List – 90, also led to a better TA rating (Svensson & Hansson, 1999). They suggested that clients with more distressing symptoms may be more inclined to be

cooperative and establish a relationship with the therapist (Svensson & Hansson, 1999). Because positive symptoms include overtly distressing experiences such as hallucinations and delusions, it is possible that clients with more severe positive symptoms may be more inclined to seek out a relationship with the therapist in order to improve these symptoms. However, because therapists also play a role in developing the TA (Bordin, 1979), it is also possible that therapists respond to clients with more distressing positive symptoms with more empathy, thus creating a more positive TA.

**Negative symptoms.** The finding that a higher severity of negative symptoms predicts a worse TA is consistent with previous research within chronic schizophrenia (Jung et al., 2014; Lysaker et al., 2011; Wittorf et al., 2009) and within FEP (Melau et al., 2015). Examples of negative symptoms include emotional withdrawal, blunted affect, and apathetic social withdrawal. Due to these symptoms, Jung and colleagues (2014) suggest that clients with more severe negative symptoms may feel uncomfortable or even unable to create a working relationship with the therapist. Similarly, the therapist may also gain little positive reinforcement from their client or know less about approaching negative symptoms in the session leading to a worse TA (Jung et al., 2014).

**Excitatory symptoms.** The results regarding a negative relationship between excitatory symptoms (e.g., hostility, uncooperativeness, and poor impulse control; Wallwork et al., 2012) and the TA are supported by previous research within chronic schizophrenia (Couture et al., 2006) and FEP (Johansen et al., 2013). Johansen and colleagues (2013) suggest that this finding is intuitive due to the inherent stress that hostility, uncooperativeness, and impulse control would put on any social relationship. Further, agreement on goals and tasks of the session is important

in establishing a positive TA (Bordin, 1979), and this may be hindered with the presence of uncooperativeness and hostility.

### **Age and Therapeutic Alliance**

Previous research within FEP suggests that older clients tend to be more engaged in therapy (Haddock et al., 2006) and agree more with the therapist on the goals and tasks of the session (Johansen et al., 2013). This research is concurrent with our findings that older age was associated with a better TA. Haddock and colleagues (2006) found that younger clients had a better TA with their therapists when receiving supportive counseling in comparison to cognitive behavioral therapy (CBT) and treatment as usual. As IRT draws on a structured approach similar to that of CBT, it is possible that younger clients may be more difficult to engage in structured forms of therapy. Haddock and colleagues (2006) suggest that younger clients may also have different developmental needs as compared to older clients, making it harder for them to engage fully in a structured therapy. For example, younger clients who develop FEP are more likely to be in a transitional time in their life—in full-time education, finding careers, and/or establishing a home for themselves (Haddock et al., 2006). Perhaps allowing for some of these pressing issues to be addressed in a more non-structured approach would increase their engagement and willingness to continue with the goals and tasks of the session.

### **DUP, Race, and Social Functioning**

Although previous research illustrates that DUP is related to outcomes within FEP including disengagement, quality of life, likelihood of remissions, and symptomatic and functional recovery (Doyle et al., 2014; Kane et al., 2016; Marshall et al., 2005; Penttilä, et al., 2014), our findings did not support DUP as a significant predictor the TA in the present sample. Because the TA is a product of both the client and the therapist (Bordin, 1979), it is possible that

the amount of time the client has gone without treatment does not affect the agreement of goals, tasks, and bond that is present between client and therapist. In addition, results indicated that DUP is significantly positively associated with positive, excitative, and depressive symptoms, suggesting that a longer DUP could indirectly affect the TA through increased symptom severity. Additionally, the current study did not find race to be a predictor of the TA; however, more research specifically targeting the matching of client and therapist on race is needed to fully determine whether race is related to the TA within IRT. Examining the effect of race matching was not possible in the present study given that data on therapists' race was not available.

Contrary to previous research across mental illnesses, chronic schizophrenia, and within FEP (Bourdeau et al., 2009; Catty et al., 2011; Couture et al., 2006; Gibbons et al., 2003; Hersoug et al., 2002; Johnson et al., 2008; Saunders, 2001; Svensson & Hansson, 1999), social functioning was not a predictor of the TA in the present study. It is possible that the QLS interpersonal relations subscale, although found to be associated with objective measures of social skills (Bellack et al., 1990), was not an adequate measure of social functioning. However, our results indicated that the QLS interpersonal relations measure was significantly negatively associated with negative symptoms such that a higher severity of negative symptoms was associated with a worse score in social skills. Due to this relationship, it is possible that social functioning may still contribute to the development of the TA as negative symptoms did predict a worse TA, and are generally equated with social withdrawal and apathy to social relationships.

### **Limitations**

Several limitations should be considered when interpreting the results of the present study. First, analyses were correlational, which precludes an understanding as to the

directionality of findings. Second, the TA was rated from an audio-recorded session, which prevented raters from observing any non-verbal social cues that may have been relevant to the strength of the alliance (e.g., body language). Third, although early sessions are most predictive of outcome (Elvins & Green, 2008), the TA ratings were based on only one session such that any fluctuations in the TA throughout treatment were not accounted for in the present analyses.

### **Conclusion**

Despite these limitations, the current study is the first to investigate predictors of the TA within FEP using an observer-rated TA scale. Although severity of symptoms and age are inherent characteristics of the clients, there are treatment implications to consider. Results suggest that therapists should receive more training in how to address clients with more severe negative and excitative symptoms in order to foster a better TA. It may be helpful for therapists to pay particular attention to the client's individual symptom profile in order to avoid making potentially inaccurate conclusions about the strength of the alliance. Incorporating activities that facilitate emotion recognition and social functioning into the main modules of therapy could benefit clients with more severe negative and excitative symptoms by offering tools to improve interpersonal functioning and the TA. Social functioning activities that improve the client's ability to develop meaningful social relationships and increase their understanding of emotions experienced by themselves and by others could benefit the bond, and agreement on goals and tasks between therapist and client. Further, within FEP, age seems to be an important component to consider when developing therapeutic treatments, and it is crucial that therapists actively try to keep younger clients engaged throughout the session to ensure a better TA. Because younger clients may be at a more transitional point in their life, it may be useful to take time to focus on

the client's personal life in an unstructured environment (i.e., in the form of a check-in at the start of the session) before delving into the goals and tasks of the session.

Future directions in research should compare IRT to differing treatment options to investigate if predictors of the TA such as severity of symptoms and age vary across different treatments provided. Further, because our nine predictors accounted for only 18.2% of the variance in alliance among client characteristics, more research is needed to elucidate additional client characteristic that are related to the TA. In conclusion, treatment providers within FEP should take into consideration the clients' symptom severity and age when beginning therapy, and adaptations to treatment should be made to foster a better TA in hopes of a better treatment outcome.

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Table 1

*Demographic, Clinical, and Baseline Characteristics of Client Participants*

	<b>Participants (n=146)</b>
<b><u>Demographic Characteristics</u></b>	
Male, n (%)	112 (77)
Age (years), M (SD), range	23.68 (5.63), 15-51
Race/Ethnicity, n (%)	
Caucasian	87 (60)
African American	45 (31)
Other	14 (9)
Ethnicity, n (%)	
Hispanic	34 (23)
Education, n (%)	
Completed college or higher	6 (4)
Some college, no degree	43 (30)
Completed high school	48 (33)
Some high school	43 (30)
Some or completed grade school	5 (3)
Current student, n (%)	29 (20)
Currently Employed, n (%)	17 (12)
<b><u>Clinical Characteristics</u></b>	
Diagnosis, n (%)	
Schizophrenia	80 (55)
Schizoaffective bipolar	10 (7)
Schizoaffective depressive	22 (15)
Schizophreniform	22 (15)
Brief psychotic disorder	1 (1)
Psychotic disorder NOS	11 (7)
DUP (weeks), M (SD), Median	190.57 (264.07), 74
Total Number of IRT Sessions, M (SD)	23.45 (17.72)
VTAS Average Score, M (SD)	17.51 (3.57)
<b><u>Baseline Characteristics, M (SD)</u></b>	
QLS Total Score	51.20 (18.77)
QLS Interpersonal	19.58 (8.63)
PANSS Total Score	78.35 (14.91)
PANSS Positive	12.57 (4.01)
PANSS Negative	16.68 (5.41)
PANSS Disorganized/Concrete	8.26 (2.91)
PANSS Excited	6.80 (2.87)
PANSS Depressed	8.28 (3.18)

*Note.* NOS = Not otherwise specified; DUP = Duration of untreated psychosis; IRT = Individual Resiliency Training; VTAS = Vanderbilt Therapeutic Alliance Scale- Short Form; QLS = Quality of Life Scale; PANSS = Positive and Negative Syndrome Scale

Table 2

*Multilevel Models of Baseline Client Characteristics Predicting Early Therapeutic Alliance*

Variable	Model 1		Model 2		Model 3		Model 4	
	Est.	SE	Est.	SE	Est.	SE	Est.	SE
<b>Fixed effects</b>								
Intercept	17.52**	.36	19.68**	1.44	18.92**	2.04	16.56**	2.75
PANSS-P			.21**	.07	.22**	.08	.19*	.08
PANSS-N			-.22**	.06	-.21**	.06	-.21**	.06
PANSS-D/C			-.02	.11	-.01	.11	.02	.11
PANSS-E			-.31**	.10	-.31**	.10	-.27**	.10
PANSS-D			.14	.09	.14	.09	.15	.09
QLS-I					.02	.04	.02	.04
DUP							<.01	<.01
Age							.13*	.05
Race							-.19	.29

*Note.* Est. = coefficient estimate; *SE* = standard error; Model 1 = unconditional (null) model; Model 2 = plus symptoms as predictors; Model 3 = plus social skills as predictors; Model 4 = plus DUP, Age, and Race as predictors; PANSS-N = Negative Symptoms; PANSS-P = Positive Symptoms; PANSS-D/C = Disorganized/Concrete Symptoms; PANSS-E = Excitatory Symptoms; PANSS-D = Depressive Symptoms; QLS-I = Quality of Life Scale Interpersonal Relations subscale; DUP = Duration of untreated psychosis.

\*  $p < .05$ ; \*\*  $p < .01$



Table 3  
*Correlations between continuous predictor variables*

Variable	1	2	3	4	5	6	7	8
1. DUP	1							
2. Age	.378**	1						
3. Positive	.212*	.161	1					
4. Negative	-.118	-.135	-.095	1				
5. Disorg./Con.	-.022	-.167*	.233**	.428**	1			
6. Excitative	.241**	-.030	.310**	-.065	.188*	1		
7. Depressive	.242**	.054	.182*	-.025	-.059	.191*	1	
8. QLS- Interpersonal	-.155	-.024	-.180*	-.427**	-.388**	-.140	-.055	1

*Note.* DUP = Duration of Untreated Psychosis; Positive = Positive Symptoms; Negative = Negative Symptoms; Disorg./Con. = Disorganized/Concrete Symptoms; Excitative = Excitative Symptoms; Depressive = Depressive Symptoms; QLS-Interpersonal = Quality of Life Scale – Interpersonal Relations Subscale

\*  $p < .05$ ; \*\*  $p < .01$

## Appendix

## Vanderbilt Therapeutic Alliance Scale (VTAS) – Short Form

1. To what extent did the patient indicate that he/she experiences the therapist as understanding and supporting?
2. To what extent did the patient seem to identify with the therapist's method of working, so that he/she sees himself/herself as an active participant in therapy?
3. To what extent did the patient act in a mistrustful or defensive manner toward the therapist?
4. To what extent did the therapist and patient together share a common viewpoint about the definition, possible causes, and potential alleviation of the patient's problems?
5. To what extent did the therapist and patient together agree upon the goals and/or tasks for the session?

*Note.* Items are rated from 0-5 using the associated rating manual. Item 3 is reverse scored in analyses.

## Quality of Life Scale- Interpersonal Relations Subscale (Items 1-8)

## Item 1: INTIMATE RELATIONSHIPS WITH HOUSEHOLD MEMBERS

## Questions:

- a. Are you especially close with any of the people you currently live with or your immediate family?
- b. Can you discuss personal matters with them?
- c. How much have you talked with them in the past month?
- d. What are the relationships like?
- e. Can they discuss personal matters with you?
- f. What sorts of things have you done together in the past month?
- g. When at home, have you spent much time around your family or were you generally alone?

## Item 2: INTIMATE INTERACTIONS

## Questions:

- a. Do you have friends with whom you are especially close other than your immediate family or the people you live with?
- b. Can you discuss personal matters with them?
- c. How many friends do you have?
- d. How often have you spoken with them in the past month, in person or by phone?
- e. What have these relationships been like?
- f. Can they discuss personal matters with you?

## Item 3: ACTIVE ACQUAINTANCES

## Questions:

- a. Apart from close personal friends, are there people you know with whom you have enjoyed doing things?
- b. How many?
- c. How often have you gotten together?
- d. What things have you done together?
- e. Have you been with people as a part of clubs or organized activities?
- f. Have you had extra social contact with co-workers, such as going to lunch together or going out after work?

## Item 4: LEVEL OF SOCIAL ACTIVITY

## Questions:

- a. How often have you done things for enjoyment that involved other people?
- b. What sort of things?
- c. Have you participated in clubs or other organized social groups?

## Item 5: INVOLVED SOCIAL NETWORK

## Questions:

- a. Are there people who have been concerned about your happiness and well being?
- b. How many?
- c. How did they show it?
- d. If some important and exciting thing happened to you, who would you contact or inform?

- e. Are there people who often provide support or help in day-to-day matters such as food, transportation, and practical/emotional advice?
- f. Are there people you could turn to or depend on for help if anything happened?

#### Item 6: SOCIAL INITIATIVES

##### Questions:

- a. Have you often asked people to do something with you, or have you usually waited for them to ask you?
- b. When you have had an idea for a good time, have you sometimes missed out because it's hard for you to ask others to participate?
- c. Have you contacted people by phone?
- d. Have you tended to seek people out?
- e. Have you usually done things alone or with other people?

#### Item 7: SOCIAL WITHDRAWAL

##### Questions:

- a. Have you felt uncomfortable with people?
- b. Have you turned down offers to do things with other people? Would you if you were asked?
- c. Have you done this even when you have had nothing else to do?
- d. Have you avoided answering the phone?
- e. How has this interfered with your life?
- f. Have you dealt with people only when it's necessary to accomplish something you want?
- g. Have you stayed to yourself at home?
- h. Have you preferred to be alone?

#### Item 8: SOCIO-SEXUAL RELATIONS

##### What is your sexual orientation?

##### Questions:

- a. Have your social activities involved women (men)?
- b. Have you avoided them or found it too uncomfortable to deal with them?
- c. Have you dated?
- d. Did you have one or more girlfriends (boyfriends)?
- e. Have the relationships been satisfying?
- f. How emotionally involved were you?
- g. Were you in love?
- h. Were you having sexual activity?
- i. Was it satisfying?
- j. Did you show physical signs of affection, such as hugging and kissing?

##### Suggested questions if married or living with someone:

- a. Were you happy in your relationship with your partner?
- b. Have you done many things together?
- c. Did you talk together much?
- d. Did you discuss personal thoughts and feelings?
- e. Did you fight much?
- f. Has your sex life been satisfying?
- g. Did you show physical signs of affection, such as hugging and kissing?

h. Did you feel close to her (him)?

*Note.* Items are rated from 0-6 by interviewer using associated rating manual based on the participant's overall functioning in each area.