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Social cognition and interaction training (SCIT) for outpatients with schizophrenia: A preliminary study

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Abstract

Social functioning deficits (e.g., social skill, community functioning) are a core feature of schizophrenia. These deficits are only minimally improved via the frontline treatments for schizophrenia (e.g. medication, social skills training, cognitive-behavioral therapy). Social cognition is a promising treatment target in this regard as it may be more strongly related to social functioning outcomes than traditional neurocognitive domains [Couture, S., Penn, D.L., Roberts, D.L., 2006. The functional significance of social cognition in schizophrenia: a review. Schizophrenia Bulletin (Suppl. 1), S-44–63]. Social cognition and interaction training (SCIT) is a 20-week, manualized, group treatment designed to improve social functioning in schizophrenia by way of improved social cognition. This article reports preliminary data from a quasi-experimental study comparing SCIT + treatment as usual (TAU; $n=20$) to TAU alone ($n=11$) among outpatients. Results using analysis of variance (ANOVA) suggest SCIT-related improvements in emotion perception and social skill.

Keywords: Psychosis; Emotion perception; Theory of Mind; Attributional style; Social functioning

1. Introduction

Social cognition is impaired in schizophrenia (Penn et al., 2006), is relatively independent of traditional neurocognitive domains (e.g. attention, memory, executive functioning), and may be the strongest predictor of functional outcome in this illness (Couture et al., 2006; Brüne et al., 2007). For these reasons, there has been recent interest in social cognitive treatment interventions. Most of these interventions can be conceptualized as either "targeted" (e.g. Silver et al., 2004) or "broad-based" (e.g. Hogarty et al., 2004) approaches. Targeted interventions focus on a single social cognitive ability (e.g. emotion perception), whereas broad-based interventions typically comprise a variety of psychosocial strategies, including techniques for improving social cognitive skills. Both of these approaches have shown promise, but both have important limitations. Notably, both conceptualize social cognitive dysfunction as a deficit state despite evidence that social cognitive biases play an important role in this population (Rosse et al., 1994; Bentall et al., 2001; Allen et al., 2004). Similarly, intervention

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techniques are adapted from information processing models that do not account for the qualitatively different characteristics of social cognitive stimuli (Penn et al., 1997) or brain functions (Frith and Wolpert, 2003).

We developed a treatment model and intervention package aimed at addressing these limitations. Social cognition and interaction training (SCIT; Roberts et al., 2006) is a 20-week, manualized group intervention that targets dysfunctional social cognitive processes which have been observed in schizophrenia, including problems with emotion perception and Theory of Mind (ToM), hasty judgment making, and biased social attributions. The treatment comprises the following three phases: (1) *Emotions*, which addresses emotion perception dysfunction; (2) *Figuring out situations*, which addresses attributional biases and ToM dysfunction; and (3) *Integration*, in which participants practice applying learned skills to interpersonal problems in their own lives.

Preliminary studies suggest that SCIT is feasable, and may improve social cognition and social functioning in inpatient populations (Penn et al., 2005; Combs et al., 2007a). The current study was a quasi-experimental trial comparing SCIT plus treatment-as-usual (TAU) to TAU among individuals with schizophrenia-spectrum disorders. Consistent with the inpatient findings, we predicted that SCIT would be associated with improved emotion perception, Theory of Mind, and social skill, as well as reduced attributional bias, relative to the TAU condition.

2. Methods

2.1. Participant recruitment and sample characteristics

Thirty-one adults with schizophrenia-spectrum diagnoses and without current substance use problems were recruited from an outpatient psychiatry clinic. All participants were receiving regular outpatient psychiatric treatment, including antipsychotic medication, throughout the study. Participants were assigned to the TAU group who either (1) declined to participate in the SCIT group ($n=4$), (2) were unable to attend SCIT due to a scheduling conflict ($n=1$), or (3) had participated in previous research with our laboratory, had agreed to be contacted for future research participation, and met study criteria ($n=6$). Three SCIT treatment groups were conducted, each with 4 to 11 participants and two co-facilitators.

2.2. Measures

Diagnosis was obtained from participants' medical charts, and confirmed with items from the psychotic disorders section of the Structured Clinical Interview for DSM-IV – Patient Edition (SCID-P; First et al., 2001). Symptomatology was assessed with the Positive and Negative Syndrome Scale (PANSS) (Kay et al., 1987).

2.2.1. Social cognitive measures

Emotion perception was assessed with two measures: The Face Emotion Identification Task (FEIT; Kerr and Neale, 1993) and the Bell-Lysaker Emotion Recognition Task (BLERT; Bell et al., 1997). Performance on the FEIT is indexed as the total number of correctly identified emotions out of nineteen pictured faces. Reliability (Cronbach's alpha) for the FEIT was 0.51. Although low, this is consistent with previous research that has used this measure (Kerr and Neale, 1993; Mueser et al., 1996; Penn et al., 2000). The BLERT consists of 21 brief video scenes in which an actor utters phrases using emotionally salient facial expressions and vocal prosody. Performance is indexed as the total number of correctly identified emotions (0–21). Reliability (Cronbach's alpha) of the BLERT was 0.77.

Theory of Mind was also assessed with two measures. The Hinting task (Corcoran et al., 1995) consists of ten brief, written vignettes including social hints that the respondent must interpret. Total scores range from 0 to 20, with higher scores indicating better performance. Reliability (Cronbach's alpha) for the Hinting task was 0.65. The Awareness of Social Inference Test (TASIT; McDonald et al., 2003) was abbreviated due to time constraints (from 16 to 10 items). The abbreviated TASIT requires participants to view and answer four Yes/No questions about each of ten brief video-taped social vignettes depicting examples of sarcasm and "white lies." Performance is indexed as the total number of correct responses, ranging from 0 to 40. Reliability (Cronbach's alpha) for the abbreviated TASIT was 0.81.

Attributional style was measured with the Ambiguous Intentions Hostility Questionnaire-Ambiguous items (AIHQ-A; Combs et al., 2007b). The AIHQ-A comprises five short, written, second-person vignettes describing negative interpersonal events with ambiguous causality. Each of the five vignettes is followed by a Hostility question (e.g. "Why did the other person do what s/he did?"), an Aggression question (e.g. "How would you respond?"), and a Blame question (e.g. "How much would you blame the person?"). Scores on each range from 0 to 5; higher scores indicate greater bias.