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Social Competence Intervention Program (SCIP): A pilot study of a creative drama program for youth with social difficulties

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ABSTRACT

This study explored the effects of participation in the Social Competence Intervention Program (SCIP), an innovative creative drama-based group intervention, of children diagnosed with autism spectrum disorder (ASD), nonverbal learning disability (NLD) and/or attention deficit hyperactivity disorder (ADHD). Eighteen participants in SCIP were compared to a clinical control group of 16 on changes in measures of social perception, social competence, and naturalistic observed social behavior. Hierarchical multiple regression model was used for all primary quantitative analyses. Interviews were conducted post-treatment to provide qualitative data. The treatment group showed significant improvement in key domains of observed social behavior in a natural setting compared to the clinical control group. Parents and children in the SCIP condition reported multiple positive changes in social functioning. These findings provide preliminary support for the use of a creative drama program for children with social competence deficits related to social perception problems.

Introduction

Deficits in social competence, or the ability to function effectively in interpersonal situations and perform competently on social tasks, are a defining characteristic of youth with autism spectrum disorder (ASD; Koenig, De Los Reyes, Cicchetti, Scahill, & Klin, 2009). Social competence difficulties have been documented not only in youth with ASD, but those with a nonverbal learning disability (NLD), and attention deficit hyperactivity disorder (ADHD), as well (Little & Clark, 2006; Woodbury-Smith & Volkmar, 2009). A key element necessary for social competence is social perception, defined as the ability to identify, recognize, and interpret the meaning and significance of the behavior of others (Lipton & Nowicki, 2009). The process of social perception can be broken down into the input of sensory cues, integration of these cues and output of an appropriate behavioral response (Johnson & Myklebust, 1967). Children and adolescents with ASD and NLD have difficulty with each of these steps (Rourke, 1995; Semrud-Clikeman, Walkowiak, Wilkinson, & Minne, 2010; Woodbury-Smith & Volkmar, 2009). Specific deficits have been found in these populations' ability to accurately decode facial cues, voice tone, and/or prosody (Deruelle, Rondan, Gepner, & Tardif, 2004). Research has also begun to identify attention issues in children with ASD and NLD (Fine, Semrud-Clikeman, Butcher, & Walkowiak, 2008) as well as social perceptual difficulties in children with ADHD (Corbett & Constantine, 2006). Emerging evidence is present in the literature that ADHD and ASD may share not only common behaviors but also a common deficit in the frontostriatal pathways as a basis of their disorders. Thus, it has been strongly suggested that studies include children with ADHD as well as those with ASD within the same groups for intervention (Corbett, Constantine, Hendren, Rocke, & Ozonoff, 2009). Empirical studies indicate that while inattention relates to social functioning difficulties (Fine et al., 2008), a more fundamental variable underlying these social skills difficulties is deficits in social perception (Semrud-Clikeman et al., 2010).

Social skills interventions

Though many social skills interventions exist, many programs have demonstrated inconsistent efficacy in addressing the social competence needs of children with ASD, NLD, and/or ADHD (Matson, Matson, & Rivit, 2007). These populations may benefit from social skills programs that are experiential rather than didactic, and developed for their specific needs (Davis & Broitman, 2011; Koenig et al., 2009; Lerner & Levine, 2007). It has been

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recommended that interventions for ASD and NLD focus on sharing relationships, and break down complex social behaviors into concrete steps (Kransny, Williams, Provencal, & Ozonoff, 2003). In recent years, various interventions targeting ASDs and related disorders have emerged that emphasize social-cognitive, relationship building and social perception skills. While promising findings using these skills have been found, they often used very small samples, failed to employ controlled group designs, and have yielded often inconsistent results (see Lerner, Hileman, & Britton, in press; Matson et al., 2007).

Drama as effective intervention

An increasing number of scholars are realizing that drama therapies may be well suited to ASD and related populations. Several programs using drama therapies are currently being used with children with ASD and have gained notoriety as treatments for social difficulties, including programs developed by Loretta Gallo-Lopez (www.playandcreativetherapy.com/services/actproject) and Lee Chasen (Chasen, 2011). More specifically, some have considered whether drama *activities* (rather than entire drama therapy programs), may have unique efficacy for remediating social challenges. Drama activities are interactive, emphasize relationships, emotions, communication, cooperation and imagination, in-context learning, and emphasize the give and take of interpersonal nonverbal cues (Spolin, 1986). A number of studies have already used drama successfully to address various aspects of social competence (de la Cruz, Lian, & Morreau, 1998; Goldstein & Winner, 2012; Lerner & Levine, 2007). Drama activities have been promoted specifically as an intervention for ASD and related disorders because they effectively address social-cognitive processes, emphasize relationships and tap into social perceptual abilities (Attwood, 2007; Sherratt & Peter, 2002; Warger, 1984). In fact, many drama activities and games in the public domain originally developed as means for actors to become skilled in reading each other's nonverbal cues for the stage, and thus directly address the social perception difficulties experienced by children with ASD, NLD, and ADHD (Schneider, 2007). Few controlled research studies have examined the use of drama activities with these populations.

Recently, Socio-Dramatic Affective Relational Intervention (SDARI; Lerner, Mikami, & Levine, 2011), a program using some creative drama techniques, was developed on the principle that children with ASD will benefit from programs that are highly motivating and focused on relationships. Pilot study results indicated generalized, maintained gains for participants in social assertion, the ability to accurately perceive nonverbal social cues (Lerner et al., 2007), as well as faster increases in within-group peer liking and interaction relative to a more traditional model (Lerner & Mikami, 2012). However, studies of SDARI have used relatively small samples (<10 participants/condition), have not examined changes in peer interaction in naturalistic settings, have only used ASD participants, and do not use a pure creative drama approach. Similarly, a modified and abbreviated version of the Social Competence Intervention Program for children aged 6–8 (SCIP; Guli, Wilkinson, & Semrud-Clikeman, 2008) resulted in positive outcomes in a qualitative study (Minne & Semrud-Clikeman, in press). All child participants demonstrated improvements in social interactions as measured by parent report post-intervention. The program used play therapy and sociodramatic play as the primary therapy modality.

Current study

The purpose of this study was to evaluate the efficacy of the full and manualized version of the Social Competence Intervention Program (SCIP; Guli et al., 2008). SCIP is a manualized creative drama intervention program designed for use with children with ASD and NLD. Our first hypothesis was that the participants, relative to a population-matched comparison group of youth who did not receive the intervention, would display improved parent-reported social functioning at the end of the intervention period as measured by a standardized rating scale. Second, we hypothesized that SCIP participants, relative to the comparison group, would display decreased errors in receptive nonverbal cue reading on an objective computer-based task at the end of the intervention. Third, we hypothesized that a subsample of SCIP participants would improve in observed naturalistic social interaction relative to the comparison group, indicating generalization of improved social skills to non-clinical settings. Finally, we hypothesized that improvements in participants' social competence would be reflected in parents' and participants' perceptions as indicated in post-treatment interviews.

Methods

Participants

Thirty-nine youth (31 male), 8–14-years-old ($M = 10.97$), participated. Nineteen children had a diagnosis of ASD that had been provided by a licensed community psychologist following a comprehensive neuropsychological evaluation. Nine children were previously diagnosed with NLD following a comprehensive neuropsychological evaluation conducted by community neuropsychologists. Eleven children had a primary diagnosis of ADHD based on DSM IV-TR criteria (APA, 2000). Thirty participants (76.9%) with ASD or NLD were reported by parents to have a comorbid diagnosis of ADHD and 20 (51.3%) were reported to take prescription medication. Thirty-six participants (92%) were Caucasian, two were Hispanic, and one was African-American. The participants were of middle to upper class socioeconomic status and attended numerous schools in and around a major southwestern American city. While all participants provided informed consent, children were unaware of the hypotheses being tested.

Inclusion criteria were (a) overall intelligence above 80 (range 80–122) as measured by the Kaufman Brief Intelligence Test (KBIT, Kaufman & Kaufman, 1990) or the Wechsler Intelligence Test for Children, Third Edition (WISC-III, Wechsler, 1991), and (b) evidence of social competence difficulties documented by *either* previous diagnosis of ASD or NLD by a licensed psychologist or neuropsychologist, *or* a primary diagnosis of ADHD along with significant deficits as indicated on the Social Skills Ratings System (SSRS; Gresham and Elliott, 1990; see below). Exclusion criteria were the presence of a history of head injury, psychosis, oppositional defiant disorder or conduct disorder, and a primary spoken native language other than English.

The first 23 children meeting all inclusion and exclusion criteria were assigned to the treatment group on a consecutive, rolling entry basis, in order to best serve the needs of the community, yielding a pseudo-random assignment procedure. Participants were referred by parents, school district personnel, and a neurological clinic in the community in a large southwestern city in the U.S. Five participants dropped the program early, one of whom was placed in the clinical comparison group. All of the participants who dropped out of the intervention program had a primary diagnosis of ADHD. After attrition, the intervention group ($n = 18$) contained 11 children with a primary diagnosis of ASD (7 of whom had a secondary diagnosis of ADHD), 2 with a primary diagnosis of NLD (both of whom had a secondary diagnosis of ADHD), and 5 with a sole diagnosis of ADHD (see Table 1).

Children were assigned to the comparison group consecutively with attempts to match for age, gender and cognitive ability. Participants in this group included children placed on a waitlist for