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## The Effects of Art Therapy on the Language Abilities of Autistic Children

**Ileah Pacheco**

*Mount Saint Mary College, Newburgh, New York*

Autism is a pervasive developmental disorder marked by extreme unresponsiveness to others, poor communication skills, and highly repetitive and rigid behavior (Comer, 2013). The most important intervention in autism is early and intensive remedial education that addresses both behavioral and communication disorders (Rapin, 1997; Rogers & Lewis, 1989). An effective autism treatment is Applied Behavioral Analysis (ABA), which emphasizes progress, generalizing skills, using those skills, and interacting with peers (Foxy, 2008; Metz et al., 2005; National Research Council, 2001). ABA therapy is not the only possible treatment for autism. The therapeutic use of art can help autistic individuals interact with the outside world and utilize social, communication, and language skills. Also known as art therapy, the goals of this therapy are to promote healing through creativity and enhance the physical, psychological, and spiritual well-being of those who have experienced trauma (Yonge, 2005). A year-long experimental design will be employed, using 800 autistic children from the early intervention schools of New York City to compare art therapy with ABA therapy versus ABA therapy alone. I hypothesize art therapy will promote verbal and comprehension abilities of children with autism beyond the effectiveness of ABA.

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Autism is a pervasive developmental disorder marked by extreme unresponsiveness to others, poor communication skills, and highly repetitive and rigid behavior (Comer, 2013). In the updated DSM-V, autism has been grouped with other developmental disorders, such as Asperger's disorder and childhood disintegrative disorder, to be categorized as autism spectrum disorder (Comer, 2013). Autism is thought to be a pattern of functional underconnectivity and reduced synchrony among cortical regions (Goldstein et al., 2008). There are other signs of autism spectrum disorder. Biological stress and symptoms of anxiety are frequently reported in people

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**Ileah Pacheco** ([ipac4975@my.msmc.edu](mailto:ipac4975@my.msmc.edu)) is a senior graduating in May 2014 with a B.A. in Psychology. She is considering a Masters of Mental Health Counseling degree.

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with autism (Corbett et al., 2006; 2009; 2011; Muris et al., 1998). Autism is also said to impair the theory of the mind. ideas, and thinking different from theirs; difficulty understanding attitudes, actions, and the emotions of others (Epp, 2008; Winter, 2003). Theory of the mind is the ability to attribute beliefs to oneself and others (Baron-Cohen, 1989; Goldstein et al., 2008). Theory of the mind contains behavioral actions such as: the inability to understand people's thoughts,

Diagnostic rates of autism are increasing (Whipple, 2004). Autism is diagnosed based on impairments in social interaction, communicative behavior, and repetitive and stereotyped patterns of behavior or interests (APA, 2000; Thompson, 2012).

Children with autism seem to be unsympathetic (Martin & Lawrence, 2008) because they cannot relate to others (Emery, 2004). Common stereotypes--of a severely

withdrawn, mute child with repetitive activities and an averted gaze or freakish-looking, inept, mathematical prodigy--do not accurately reflect the broad spectrum of autism (Rapin, 1997). Autistic children cannot utilize social, communication, or motivational skills. Autism affects coherence, flexibility of motivation, and consciousness (Condon & Ogstan, 1996; Trevarthen, 2002). Epp (2008) understood that the lack of social skills may lead a child to experience rejection and bullying. When an autistic child is confronted with social interaction, he/she can get frustrated and lash out because the child is sensitive to how others behave (Epp, 2008; Trevarthen, 2002). An inability to concentrate, together with intrusive stereotypes such as hand flapping, may prevent children from engaging in meaningful activity or social interaction (Rapin, 1997). Fortunately, there are treatments for children with autism.

A child's treatment should be unique and evolve with the child (Foxy, 2008). The most important intervention in autism is early and intensive remedial education that addresses both behavioral and communication disorders (Rapin, 1997; Rogers & Lewis, 1989). A well-recognized autism treatment is Applied Behavioral Analysis (ABA). Applied Behavioral Analysis emphasizes progress, generalizing skills, using those skills, and interacting with peers (Foxy, 2008; Metz et al., 2005; National Research Council, 2001). The goals of ABA are to motivate the child to be successful and provide a regimen that will ensure the child reaches their highest potential and level of independence (Foxy, 1982; Foxy, 2008; Green, 2008; Lovaas, 1981; Maurice et al., 1996; 2001). Using social construct and educational repertoires to decrease specific behaviors is why the treatment is applied consistently (Foxy, 2008; Green, 1996). After analyzing 18 interventions, Metz (2005) concluded that the only interventions that have been shown to produce comprehensive, lasting results in autism are those based on the principles of ABA (Foxy, 2008). In addition to ABA therapy, parents' roles are important in a child's treatment. Support from the family, especially the parents, can be beneficial for the child's treatment progress. Family-centered treatment has been a positive influence on children with autism. A central tenet of family-centered practice is practitioners and families striving to work together (Davis, Day, & Bidmead 2002; Thompson, 2012). Roberts and Prior (2006) suggests that family-centered programs that are responsive to individual differences amongst children and families are particularly beneficial in supporting skills (Thompson, 2012). Family-centered practices improve self-efficacy, which has a positive

impact on child development (Dunst, 2007; Thompson, 2012). The parents are the most influential people in family-centered practices (Simpson 2005). Events that occur in the family will affect the autistic child (Dunst et al., 1988; Thompson, 2012). When family is involved in the therapy, the children are more likely to learn new skills. Family-centered treatments can aid the improvement of language skills for children with autism.

The ability to understand and respond to complex language forms may be an important target for some children with autism (Hundert & van Delft, 2009). Klien (2004), as well as Nation, Clarke, Wright, and Williams (2006), described some children functioning in the high end of autism as those who were able to read individual words adequately, but were limited in their ability to comprehend what they read. Of those children, there speech may be literal, repetitive, and non-communicative and is often marked by striking echolalia or "overlearned scripts" (Rapin, 1997). Children with autism who speak late may progress rapidly from silence or jargon to fluent, clear, well-formed sentences (Tager-Flusberg, 1994).

Autistic children are often visual learners (Epp, 2008). Visual memory for some types of materials have been found to be an area of strength for children with autism but complexity of stimuli appears to affect memory function (Williams, Goldstein, & Minshew, 2006). Autistic individuals have adequate visual memory for pictures of common objects arranged randomly or sequentially (Hermelin & O'Connor, 1970; Prior & Chen, 1976; Williams et al., 2006). Lovaas, Koegel, and Schrieblman (1979) found that children with autism can learn descriptions by focusing on one feature of a multiple-stimuli presentation and, as a result, may not respond when the selected stimuli is not present. Individuals strive to grow through connections with others that provide a sense of meaning and well-being, which is why the teacher must create a personal connection with the child (Dominguez, Holman, & Lenz, 2010; Jordan, 2001). Emery (2004) states that consistency is essential to help children with autism grow and develop because children with autism have strong associative learning skills (Boucher & Warrington, 1976; Williams et al., 2006). Hundert and van Delft's (2009) study suggested that some autistic children may profit from specific in answering inferential "why" questions. So if teachers were consistent in utilizing the children's associative skills, the children could grasp the information more.

Art therapy has been used for children with autism. Hans Asperger is quoted as having said, "It seems that for success in science and art, a dash of autism is

necessary” (Sheila, 2009). The goals of art therapy are to promote healing through creativity and enhance the physical, psychological, and spiritual well-being of those who have experienced trauma (Yonge, 2005). Rundquist (2000) commented that art therapy is an elusive concept for many outside the field. Art therapy emerged from the synthesis of art and psychoanalysis; this drew on the vastly different creative energy of both, but its unique genius derived from working on their complementary nature (Eisdell, 2005). Carl Jung viewed art-making as a means of expressing the sacred and mysterious—an important element in the “individuation process” (Eisdell, 2005). This relatively new discipline continues to emerge in the 21<sup>st</sup> century, taking the well-earned place as part of a holistic view of mental health treatment (Rundquist, 2000). Art therapy for autistic children can be an important activity-based intervention for encouraging their growth (Emery, 2004) because kids are more likely to open up when they are being creative (Sheila, 2009). Children create art because it is rooted in the need to relate to their world (Emery, 2004). A child’s art reflects their inner world (Emery, 2004), which is why they are emotionally connected to their drawings (Emery, 2004; Gardner, 1980). How to engage in the talent for creativity and channel it into therapy is the skill of a trained art therapist (Rundquist, 2000).

Art therapy is comprised of different forms. One form of art therapy is music therapy. Music therapy integrates the processes of the mind together and makes the children communicate (Trevvarthen, 2002). Music is a form of human communication (Trevvarthen, 2000; 2002; Trevvarthen & Malloch, 2000) and can address problems of moving, sensing, and feeling. A musical response is possible for a child who has severe physical, intellectual, or emotional handicap (Trevvarthen, 2002). The nonverbal aspect of music is viewed as a means of engaging the child and the therapist in musical-emotional communication (Alvin, 1978; Alvin & Warwick, 1992; Malloch & Trevvarthen, 2009; Simpson & Keen, 2011). The improvisational technique allows the therapist to be responsive to the child and to facilitate active and receptive music elements, while the structured set songs rely on receptive music techniques and allow for little flexibility in the mode of presentation (Simpson & Keen, 2011). Kim et al. (2008) found the music condition to be significantly more effective than play sessions (practicing music together) in increasing responses to joint attention and initiating low level joint attention acts (i.e., eye contact), while little change was observed in initiating high level joint attention behaviors, like pointing and showing.

The recent National Standards Project conducted by the National Autism Center (2009) classified music therapy as an emerging evidence-based practice useful in teaching individual skills or goals by initially targeting the skill through song or rhythmic cue.

Another form of art therapy is theatrical therapy, also known as drama therapy. Theatrical therapy has been used to enhance social skills in children with communication challenges as well as autism (Corbett et al., 2011; McAfee, 2002; McCarthy & Light, 2001; Peter, 2003; Wright et al., 2006). Children with autism possess the ability to learn from observation, imitation, and modeling, and theatrical therapy enhances this ability through example (Corbett et al., 2011; Egel et al., 1981; Garfinkle & Schwartz, 2002; Rohler, 1997). The participants showed modest improvement in face identification and theory of the mind skills (Corbett et al., 2011). Corbett’s (2011) results showed the potential promise of using a theatrical setting, along with established behavioral science methods, to facilitate the development of core areas of challenge in youth with autism.

Although art therapy can be practiced differently, the standard form of art therapy is drawing. When drawing, the child is processing information about the emotion expressed on subject’s face using visual, cognitive, and motor skills (Martin & Lawrence, 2008). Margaret Naumberg, a pioneer in art therapy, regarded art as ‘symbolic speech’, and Naumberg (1958) believed symbolic ‘visual’ communication less problematic for some patients, and can facilitate the later development of ‘verbal’ speech. Visual image making is part of the process, affording distance and chance to creatively construct a new solution (Rundquist, 2000). The playful nature of ‘visual’ conversations can trigger poignant ‘verbal’ conversations (Eisdell, 2005). In playing, the individual child or adult is able to be creative and use their whole personality, and its only when he/she creatively uses all aspects of themselves can he/she discover who they are (Eisdell, 2005; Winnicott, 1974).

Martin and Lawrence (2008) used their portrait drawing assessment to conduct a study that assesses an autistic child’s ability to identify faces. The study split 25 children into a neurotypical (non-autistic children) and autistic group. Martin and Lawrence (2008) discovered that art therapy provides an autistic child with a sense of mastery, autonomy, visual pleasure, and a link to the world; as well as improve communication and imagination abilities (Evans & Dubowski, 2001; Martin & Lawrence, 2008). Dominguez et al. (2010) conducted a case study of

a 17 year old girl and a teen peer group of boys between 13 and 15 years old, and each case had three sessions in which they were given tasks that would teach them basic social skills, communication, sharing, listening, and problem solving. Dominguez et al. (2010) found a relationship between problem solving and perceiving the self to be effective. Art interventions can prompt self-awareness and positive social relations (Dominguez et al., 2010; Glass, Guli, & Semrud-Clikeman, 2000). Eisdell (2005) conducted a case study with a 25 year old incarcerated psychotic patient who was mandated by the court to attend therapy. During the therapy, the patient began to develop a self-reflective capacity and emotional vocabulary: first visual, then verbally articulated (Eisdell, 2005). The journey undertaken suggested that with some patients, working interactively with visual imagery may facilitate the development of a therapeutic relationship in which words can be spoken (Eisdell, 2005).

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Autistic children experience moments of frustration; and art therapy offers an acceptable means of discharging aggression and enables the child to self-soothe (Epp, 2008; Henley, 2000). Art therapy can address social

skills such as participation, compromise, and eye contact (Epp, 2008). Art therapy may help children with autism to develop vital life skills that hinder them. If art were used as a therapeutic tool, the language ability of children with autism might be enhanced. Although there have been case studies on art therapy, no one has experimentally looked at the effects of art therapy. The focus of this study is the effect of art therapy on language development of autistic children, specifically the children's verbal and comprehension ability. I hypothesize art therapy will promote verbal and comprehension abilities of children with autism beyond the effectiveness of ABA alone.

## PROPOSED METHOD

### *Participants*

In conjunction with early intervention schools in New York City, 800 autistic children will participate in this study. The ages will range from 3 to 6 years old. Parents of each child must fill out a consent form for their child's participation. Before the study, each child will be screened to ensure their diagnosis of autism.

### *Procedure*

Consent from both parents and early intervention schools are required for participation. Using the CELF-P test (The Clinical Evaluation of Language Fundamentals-Preschool) as the pre-test and post-test, each child's skill level is assessed before and after therapy. The CELF-P measure can evaluate lexical-semantic and verbal memory ability (Semel, Wiig, & Secord, 1995). The pretest will be administered to establish a starting point. Along with the pre-test and post-test, the children will be evaluated once a month, using the PPVT-III (Peabody Picture Vocabulary Test), to monitor the progress of the children in both groups (Dunn & Dunn, 1997). Participants will be randomly assigned into either the control group or experimental group with 400 children in each group. The children and their parents are not aware of which group the children are assigned.

The control group will participate in ABA (applied behavioral analysis) therapy sessions, as prescribed for a year. During the ABA sessions, children will create stories with the therapist, about different things they find important, and the therapist may even use flash cards to give the child a directive. The therapist will provide positive reinforcement to encourage them to speak more.

The experimental group will also be given ABA as prescribed plus art therapy for a year. The sessions will be split in half by using ABA therapy for the first and art therapy for the of the sessions. The therapist will ask the children to draw a picture (i.e. family, favorite animal, etc.), using crayons and paper. The therapist will ask what their picture is about and together they will create a story for the picture, meanwhile the therapist will provide encouragement through kind words and cheering. Through the process of drawing, a story will be developed in which the children and therapist will engage in conversation.

After a year of therapy, the CELF-P will be used again as a post-test to measure the current speech and comprehension skills of each child in both groups. The difference in gains will determine if art therapy can enhance the language abilities of children with autism beyond ABA alone.

### CONCLUDING REMARKS

#### Limitations

The sample of participants for this study is autistic children only in New York City. Therefore the study cannot be generalized for all autistic children. Participants range from 3 to 6 years old. Therefore results cannot be applied to older autistic populations. Since this study is only evaluating one skill set (language), it does not include other skill sets that are impaired by autism.

#### Significance

Diagnoses of autism spectrum disorder are increasing, especially in children. Significant positive results from this study could give credence to using art therapy for autistic children. Since there are only case studies on the effectiveness of art therapy, evidence based practices could elevate the authority of art therapy in society. Future research may benefit from measuring the effect on other skill sets, including participants from across the country, or using an older population. Art therapy has the capability to help autistic children go from non-verbal to verbal, so they can communicate with the outside world. Along with increasing verbal ability, art therapy can help autistic children understand the semantics of conversations and stories. Art is already seen as therapeutic, so using art therapy could change the face of autism spectrum disorder.

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