

THE EFFICACY OF ART THERAPY IN THE REDUCTION OF SYMPTOMS OF ADHD

Hina Ayaz Habib and Uzma Ali

Institute of Clinical Psychology, University of Karachi

ABSTRACT

Objective: The aim of the present study is to highlight the significance of Art as therapy for the reduction of symptoms of Attention Deficit Hyper Activity Disorder.

Place of Study: Karachi, Pakistan

Research Design: Case study

Sample and Method: This paper is based on a case of a 6 year old boy with Attention Deficit Hyper Activity Disorder predominantly hyperactive-Impulsive type and Mild Intellectual disability. He was regular student of a special school in Karachi, Pakistan. He was given art as therapy, in 25 sessions of behavioral approach to art therapy. ADHD-T was administered for measuring the intensity of symptoms, Human figure drawing and free drawing was done for measuring the developmental and artistic level of the boy before and after the therapy sessions

Results: Results showed decrease in the intensity of the symptoms of Attention Deficit Hyper Activity Disorder and improvement in the developmental and artistic level of the child.

Conclusions: The results revealed the effectiveness of art therapy in reduction of the symptoms of Attention Deficit/hyperactivity Disorder. The improvement is vivid in the graphic presentation of the art work. Limitations and implications were also discussed.

Keywords: Art therapy, ADHD, developmental level, artistic level.

INTRODUCTION

Attention-Deficit/Hyperactivity Disorder is a neurobehavioral disorder which is characterized by impulsivity, inattention and hyperactivity that affect school-aged children and adults. ADHD is heterogeneous, and the presentation of symptoms can vary considerably (American Psychiatric Association, 2013).

The behavioral manifestation of symptoms of inattention in ADHD are; drifting off task, having failure or difficulty in sustaining focus and being disorganized and these all behaviors are not due to defiance or lack of understanding. It is linked with various underlying cognitive processes and might show cognitive problems on tests of attention and executive functioning (American Psychiatric Association, 2013).

Impulsivity refers to hurried actions that happen in the moment without foresight and that have high probability of harm. Impulsivity may reflect a need for instant rewards or an inability to postponement of gratification. Impulsive behaviors may manifest as social intrusiveness, for example, interrupting others markedly and/or as making essential decisions without thoughtfulness of long-term consequences (APA, 2013).

There are many documented treatment approaches and numerous researches to investigate the efficacy of different treatments used to treat the children with ADHD. According to the findings of a study conducted on approximately 600 children with ADHD to investigate the Multimodal treatment approach, behavior modification, medication and the combination of two were found to be most effective (MTA Cooperative Group, 1999). For more than three decades behavioral techniques and treatments have been used to treat children with disruptive behaviors (O'Leary & Becker, 1967).

Art therapy (AT) is a relatively new profession in comparison to the traditional methods of treatment. It looks to work as a treatment modality through the use of art as medium for healing. AT has two camps of thought; “art psychotherapy” and “art as therapy”. These two approaches to therapy are deep-rooted in different theoretical ideologies dealing with how the art is used and the outcomes it produces (Ulman, 1987). For the purpose of this study, the focus is on “art as therapy” as the approach to art therapy.

Although AT has been used as an intervention tool with children to promote positive social skills, increased academic achievement and expression of emotions (Pace & Schwartz, 2008), AT can be beneficial to all children, is can be most receptive by children with emotional, developmental and behavioral problems (Dunn-Snow, 1999).

A study conducted by Henley (1998), stated, “Aggressive or impulsive behaviors related to the hyperactivity or social anxiety can be channelized into

socially productive forms of self-regulation through facilitated creativity. The results of the cited research are suggestive of AT as a means of behavioral change. Many other researchers that have examined the efficacy of Art integration have noted positive behavior changes in children (Pace & Schwartz, 2008).

Considering above mentioned literature and applicability of art therapy with children with emotional, developmental and behavioral problems it is clear that behavior therapy or art therapy or behavioral approach to art therapy are effective treatment methods in the reduction of inattention and impulsive behaviors. Limited researches are available with reference to utilization of AT, or approaches of AT as treatment intervention for children with symptoms of intention of impulsive behaviors. Extensive amount of research is required on all aspects of this disorder specifically, in regards to behavioral symptoms and treatment of those symptoms. In the present study the researcher want to understand the effectiveness of art therapy for children with ADHD that is comorbid with Intellectual Disability

XYZ (the name has been changed to provide confidentiality) was a six years and eight months old boy, who was diagnosed with Attention- Deficit Hyper activity disorder predominantly hyperactive-Impulsive type and Mild Intellectual Disability at the age of six years. His birth order was last and has two elder siblings. His father's qualification is graduate and he was working in a private company. His mother's qualification was intermediate and she was a housewife. He belongs to a nuclear family with middle socio-economic status. He was a regular student of special school at Karachi, Pakistan.

As the diagnosis of disorder is mainly symptoms based, on observation. So during eight hours of observation it was observed that he was a child who has difficulty remaining seated in class. He was usually twisting or moving while seating. During group activities in the class it was very difficult for him to wait for his turn, he usually demands immediate attention, or move the face of the teacher or the person towards himself. During regular classroom activities or games he continuously uses to talk. It was difficult to understand his speech, first due to the speed and secondly due to sound substitution and omissions. It was too difficult for him to be on one activity till the end, he usually shift from one activity to the other activity without completing it. He never put back the things at their places after the activity even in lunch hour he never put his lunch box

back in his bag. He was able to do many other tasks that his age equivalent children can do. He has good fine motors skills.

For collecting the baseline data, measuring the severity and frequency of behaviors, setting goals, intervention and selecting art material following tests and procedures were done: Detail study of the child psycho-diagnostic report, Attention- Deficit / Hyperactivity Disorder Test (ADHDT; Gilliam, 1995); Human Figure Drawing (HFD; Koppitz, 1968); informal assessment, 8 hours of observation (4 hours, a day).

METHOD

Participants

Current research narrates the case study of a child. The characteristics, demographics and other information are given in the introduction section.

Measures

Demographic Data Sheet

A demographic sheet was prepared; it consisted of name, age, sex, birth order, year of schooling, family structure, socio-economic status, parental qualification and profession.

Observation Recording Sheet

A recording sheet was prepared to record the baseline data and later was used to record the session notes i.e. any significant behaviors, verbalization and procedure within sessions.

Attention- Deficit / Hyperactivity Disorder Test (ADHDT; Gilliam, 1995)

The ADHDT is a standardized, individually administered test of Attention Deficit/ Hyper Activity Disorder (ADHD), based on the DSM-IV (APA, 1994) criteria of ADHD. The ADHDT is comprised of three subtests: Hyperactivity, Impulsivity and Inattention respectively, totaling 36 items. The items are related to the three core symptoms of the ADHD. Scores were computed for each subtest. Then the raw scores were converted to standard

scores and percentile ranks. The sum of the subtests standard score were converted into the ADHD Quotient and their percentile. For the purpose of this study raw scores were used. The internal consistency and reliability of the subtests were determined to be in the .80s and .90s (Gilliam, 1995).

Human Figure Drawing (HFD)

The test was developed by Koppitz (1968). Koppitz's developed scoring procedure, for assessing various items in human figure drawing that could be expected to appear in HFDs of children age ranging from 5 to 12 years. In this case study the HFD test is used to measure the developmental indicator. Reliability studies indicate that the inter-rater reliability commonly exceeds 0.90. (Koppitz, 1968; Synder & Gaston, 1970; van de Vijfeijken, 1994).

Therapeutic Intervention

Pre Intervention

Initially the researcher obtains permission from the authorities of the School and discussed the purpose and ethical consideration of this study. Then informed consent from the authorities and parents was taken and researcher ensured that all the information and data would only be used for the research purpose. Brief description of the study was also given.

The study was started in September 2012. Two sessions per week were conducted with the child. The duration of each session was 50 minutes. Twenty five sessions were supposed to be done within a time period of 10 weeks (2.5 month). But due to the absentees, occasional holidays and mainly city circumstances (like strikes and protests), 25 sessions were conducted within a period of 14 to 15 weeks.

The child was diagnosed with ADHD (mild) and Intellectual disability, Mild by the trained and qualified clinical psychologist on the basis of clinical Interview, detailed Assessment and criteria given in Diagnostic and statistical Manual of Mental Disorders (DSM-IV; APA, 2000). First of all the child was observed 8 hours (4 hours a day; 2 days) to assess and confirm the display and frequency of the behavioral symptoms of ADHD prior to the therapy sessions. Afterwards the Attention Deficit/ Hyper Activity Disorder Test (ADHD-T) was administered to obtain the severity and frequency of impulsive behaviors and

inattention the form of scores and a baseline was established. To understand the mental maturity level and the artistic developmental level (Malchiodi, 2003), the researcher let the child draw freely in the first session.

Intervention phase

After understanding the child's developmental and artistic level, appropriate and obtainable goals were set for the child. At the beginning of the therapy session when he was asked to draw freely, he took colored big sheet that is chart papers, a box of crayons and then more crayons than instead of drawing, open the boxes start placing them on the table. Then the exposure or usage of the pre-art and art material i.e. water, flour dough, modeling clay, crayons and pencil color was introduced.

The child was clearly explained and later discussed about the do and don'ts or the boundaries of the session that is, the starting of the session, selecting the activity or the material, safe the material and product and putting back all the material used and cleaning the place before leaving.

Afterwards in the sessions the techniques of behavior therapy to art therapy were used, more specifically behavioral approach to art therapy was used. Roth's behavioral techniques created for art therapy were also incorporated. Throughout the process the use of positive reinforcement was a fundamental component, in the form of verbal appreciation, clapping, tap, nonverbal gestures and cues which encourages the child to continue the process and assists in developing therapeutic alliance. Appropriate behaviors like on task behaviors, sitting, completing the task, use and handling of material, making choices of activity, clearing the place, keeping all things back at their place and saving the product all were encouraged or rewarded in verbal and tangible rewards. The researcher used interventions that had an impact by providing modeling and prompting; introduce different art materials and mediums that can create interest and involvement in the process.

Post intervention

After the completion of the treatment sessions, the child was assessed again with ADHDT test and HFD to evaluate the any reduction in impulsive behaviors or inattention as well as for developmental indicators level.

Data in the form of artwork creations created by the children was stored in folders created for each child. Each artwork was numbered, labeled and photographed with name (coded) of the child, session number and date on the back. Case notes based on the researcher's observation and all that occurred during the sessions, questions, significant verbalization of the children within the session all was documented. Selected images of the artwork creations showing the improvement in the handling and usage of material and product are attached at the end of the article.

RESULTS

Therapeutic outcome of the therapy showed that art therapy is effective in the reduction of symptoms of ADHD (Table 1& 2).

Table 1
Difference in the raw scores on the symptoms of inattention, impulsivity and Inattention before and after treatment (N=1)

	Pre Treatment	Post Treatment	Pre-post Difference
Hyperactivity	17	16	1
Impulsivity	15	14	1
Inattention	13	13	0
Total	45	43	2

Note: Pre-post difference showed that after the application of art therapy there is a reduction in the raw scores of Hyperactivity and Impulsivity.

Table 2
Difference in the raw scores of developmental indicators of HFD before and after treatment (N=1)

	Pre Treatment	Post Treatment	Pre-post Difference
Developmental Indicators	3	5	2

DISCUSSION

Art therapy is used to as a treatment modality with children with emotional and behavioral problems. This case study showed its efficacy. The researcher evaluated the differences of the raw scores of the subtests measuring the hyperactivity, impulsivity and inattention. It indicates that there was reduction in hyperactivity and impulsive behaviors (table 1). Later, qualitative analysis of the child's drawings was also done and the crucial element and important images were placed in the discussion section to visually address the areas of growth and improvement throughout the therapy.

Findings of this study are consistent with the limited previous findings in other countries that mention art therapy to be an effective intervention for those who are suffering with symptoms of Attention Deficit Hyper Activity Disorder. For Attention Deficit Hyper Activity Disorder as according to Association of Natural Psychology (Association for Natural Psychology, 2006), art therapy might be one of the most single effective therapies to help children and adults to concentrate, slow down and stabilize.

Previously Smitheman-Brown and Church (1996) in their study with children with ADHD has investigated visual measurement of creative growth and behavioral changes due to art therapy. The findings of their study indicates the efficacy of art activity in increasing attentional abilities, better decision making, growth, completion of task, interest in personal aesthetics and decrease in impulsive behaviors. These findings supports the efficacy of the Art therapy in two populations, primarily with children with Attention Deficit Hyper Activity Disorder and secondarily its effectiveness with the developmentally delay children. The present findings are consistent with the previous researches conducted with the children with intellectual disabilities.

Conclusion and Future Directions

Art therapy more specifically behavioral approach to Art therapy is found to be beneficial in the reduction of behavioral symptoms of Attention-Deficit / Hyperactivity Disorder. Present study demonstrates the effectiveness of a therapeutic intervention in Pakistani (Asian) culture where medication is the first line of choice in treating the disorder. In view of the present study findings it is strongly recommended that professional dealing with children with Attention-

Deficit / Hyperactivity Disorder should consider the importance of art therapy in their treatment and educational plans.

Ethical Consideration

Before starting any work with the child informed consent was obtained from the authorities of the school/institute (director and the concern teacher) as Ethical considerations became the most important area in conducting a research with human subjects. To ensure confidentiality the name has been changed to pseudonym and to keep the anonymity, all the identifying graphic imagery and the name of the child was removed from all the images.

Crucial element and important images visually addressing the areas of growth and improvement throughout the therapy



Figure 1.1 Pre HFD



Figure 1.2 Post HFD

Child's drawings in crayons starting from circle and repeated making of single circles and verbalizing circle in the initial sessions till merging other objects with circles and naming every objects in the seventh session and later relating them



Fig 2.1



Fig 2.2

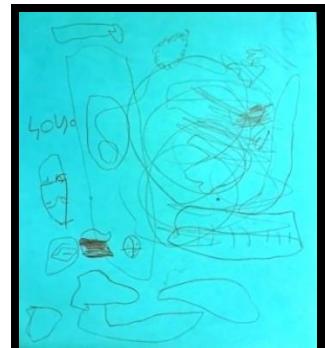


Fig 2.3

Art creations made in modelling clay; in the first 4 session the child didn't use modelling clay, than in 5 session the clay was introduced to the child, initially it was difficult to manipulate the clay by the child gradually he learns to manipulate, squeeze and role the modelling clay. At the end of 25 sessions the child was able to make things by using the coil method.



Fig 3.1



Fig 3.2



Fig 3.3

Acknowledgement

The researcher is highly thankful to Kishwer Sultan, Director Sindh Special Education Center: Quaideen, for giving permission to conduct this study and to use the file record of the participant. I am also thankful to the teachers and parents for giving consent for the study and their cooperation and support.

REFERENCES

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). American Psychiatric Publishing. Washington, DC. Author.

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). American Psychiatric Association. Washington, DC. Author.

Association for Natural Psychology (2006). *Art Therapy*. Retrieved from http://www.winmentalhealth.com/arts_therapy.php

Dunn-Snow, P. (1999). A school inclusion approach: Evaluating embedded assessment within the context of multicultural group art experiences. *Delta Kappa Gamma Bulletin*, 66 (1), 41-50.

Gilliam, J. E. (1995). *The Attention-Deficit/Hyperactivity Disorder Test: A method for Identifying ADHD*. Austin, TX: PRO-ED.

Henley, D. (1998). Art therapy in a socialization program for children with attention deficit hyperactivity disorder. *American Journal of Art Therapy*, 37(1), 2-11.

Koppitz, E. M. (1968) *Psychological evaluation of children's human figure drawings*. The Psychological Corporation, Harcourt Brace Jovanovich, Inc.

Malchiodi, C. A. (2003). Art therapy and the brain. In C. A. Malchiodi (Ed.), *Handbook of art therapy* (pp. 16-24). New York: Guildford.

MTA Cooperative Group. (1999). A 14-month randomized clinical trial of treatment strategies for attention-deficit / hyperactivity disorder: Multimodal Treatment Study of Children with ADHD. *Archives of General Psychiatry*, 56 (12), 1073-1086.

O'Leary, K. D., & Becker, W. C. (1967). Behavior modification of an adjustment class: A token reinforcement program. *Exceptional Children*, 33, 637-642.

26 Habib and Ali

Pace, D., & Schwartz, D. (2008). Students create art. *Teaching Exceptional Children*, 40 (4), 50-54

Smitheman-Brown, V. & Church, R. P. (1996). Mandala Drawing: Facilitating creative growth in children with ADD or ADHD. *Art Therapy: Journal of the American Art Therapy Association*, 13 (4), 252-262.

Snyder, R. T. & Gaston, D. S. (1970). The figure of the first grade child: item analyses and comparison with Koppitz norms. *Journal of Clinical Psychology*, 26, 377 – 383.

Ulman, E. (1987), Variations on a Freudian Theme: Three Art Therapy Theorists, In J.A. Rubin (Ed.), *Approaches to art therapy*. (pp. 277- 298). NY: Bruner/Mazel

van de Vijfeijken, K. (1994). *Normeringmenstekening voor 4-12 jarigekinderen* [HFD norms for 4-12 year old children]. Leiden: Leiden University Press.