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Adolescents with Attention-Deficit Hyperactive Disorder and/or Oppositional Defiant Disorder

Benefit from Active Visual Arts Therapy

Capstone Thesis

Lesley University

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Abstract

This literature review investigates the implementation of medication and active arts therapy with adolescents with attention-deficit hyperactivity disorder (ADHD) and/or oppositional defiant disorder (ODD). Adolescents ages 13 to 19 spend most of their time in school. School systems have modified a therapeutic setting to benefit and assist students with these diagnoses. This paper analyzes whether the implementation of active visual arts and play therapy has positive effects for adolescents with ADHD and/or ODD involved in taking or not taking medication, resulting in a positive impact on their quality of life. By reviewing previous research, this literature review builds a case that supports the implementation of these practices for the successful treatment of ADHD and/or ODD. Having the information on both art therapy and the use of medication can help adolescents with ADHD and/ODD be more successful in school. Pairing art therapy and play therapy with or without medication can provide them with coping skills that will assist in preparation for independence and functioning in society.

Keywords: ADHD; ODD; co-occurring; adolescents; art therapy; medication

Adolescents with Attention-Deficit Hyperactive Disorder and/or Oppositional Defiant Disorder
Benefit from Active Visual Arts Therapy

A therapeutic approach in a school setting has shown to be beneficial for children and adolescents with mental illness (Whitcomb, Hefter, & Barker, 2016). Some therapeutic schools have multiple counselors and art or music therapist as key components of their programs. Working in a school system as an intern, I have witnessed the impact that having an art room available, staffed by an art therapist, has on students. The students tend to be drawn to the art room, whether to find relief from classroom stressors or to engage in counseling sessions. Many of these students are diagnosed with attention-deficit hyperactivity disorder (ADHD) and oppositional defiant disorder (ODD). Students with hyperactivity have a harder time staying in one place. These students can be observed in the art room working out their overabundance of energy by working very quickly and making multiple projects at a time to satisfy the need for additional movement and stimuli. Having access to the therapeutic setting supports students in decreasing the negative impact of their disability.

During the first few weeks at my internship I observed the number of students being drawn towards the art room, particularly students requesting to participate in the art room outside of their assigned class time. Multiple times it was the same student requesting the room. Students struggling in class would request to *take space*, time to process what has just happened and/or calm frustrations, and work with one of the many staff in the art room. Each student brought a different level of energy into the room. Those who were hyperactive brought a large amount of movement and conversation, while others were more reserved.

One student did not request the art room but was advised to take space by a staff member. The student explored the room receiving help from my co-interns and me, who suggested a few

art directives until he discovered the crayons. He asked for a small canvas to melt the crayons on. The three of us assisted him to get started. While he melted crayons onto one canvas, he insisted on a second canvas for the first canvas to drip on. At the end of this 20-minute process he had three small canvasses with melted crayons. This student is diagnosed with ADHD and shows hyperactivity and aggression when in stressful situations.

While focusing on the art directive, the frustrated aggressions the student was displaying when entering the room, subsided and resulted in three art products. During his work, he verbalized his frustrations and shared his side to what he perceptions of the situation that caused him such frustration and anger, while completing the pieces. When a child is exposed to high doses of adversity, high risk behavior is more likely to occur (Harris, 2015). In her Ted Talk, Dr. Nadine Burke Harris (2015) uses the example of a person walking in the forest and they run into a bear; that person's body releases the stress hormones adrenaline and cortisol. The person's heart starts to pound, pupils dilate, and air ways open up; this is the fight or flight response. Imagine the bear is in the home, and that this system response repeats every day and night. It now becomes damaging to the child's developing body and brain. According to Dr. Harris' theory, this person's trauma is where a mental disorder develops. In my observations of this student, he has developed *fight* behaviors to cope with the adversity he faces.

To start improving on their work with different populations, therapists must learn more about the populations through collaboration, research, and experiences. Students with ADHD and ODD struggle with school, interacting with their peers, focusing on school work, and organization in their daily lives (Whitcomb et al. 2016). The impact of hyperactivity makes it very difficult for these students to settle and regulate behaviors such as impulsivity (Gadow, Sprafkin, Scheinder, Nolan, Schwartz, & Weiss, 2007). The explosive behavior that is

associated with ODD symptoms are heightened when the client has ADHD in addition to ODD. Medication has become more popular to subdue the initial symptoms in children diagnosed with ADHD and/or ODD. Even with medication, some symptoms still appear and the diagnosed has not been given the proper coping skills (Kita & Inoue, 2017). Therapists need to learn more about the disorders separately and together. Looking at different settings and working with these students, the medication, and using an active process through visual arts can benefit these adolescents through increasing their awareness and applying coping skills.

With each population, art therapists work through different areas of focus. In an alternative high school setting, many students demonstrate symptoms of different diagnoses and often lack social skills. A few of the students have trouble controlling their anger and struggle with applying coping skills. Having a chance to work with this population was a great opportunity and has given me experience in working with adolescents with ODD and ADHD who struggle with regulating their behaviors. In my experience, students struggling with ODD and/or ADHD have found an outlet in the art room through the use of various art forms. Through the comparison of literature, I will analyze the effects of an active process using visual arts and medication on adolescents with ODD and/or ADHD. This literature review will focus on the diagnoses, different active art processes, play therapy, and adolescents that are medicated and those that are not.

Literature Review

Understanding Diagnoses

Attention-deficit hyperactivity disorder with co-occurring diagnosis. For a child who is diagnosed with ODD/ADHD it is common that at least one or both parents show symptoms of ODD and/or ADHD (Gadow et al., 2007). It is found that 5% of children are diagnosed with ADHD, and according to multiple research studies, half of those children also have ODD (Chen, et al., 2017; Jarrett, Wolff, Davis III, Cowart, & Ollendick, 2012). Gadow et al. (2007) took into consideration co-occurring diagnoses or psychiatric symptoms and psychosocial risks. ADHD is one of the many disorders that have an effect on the symptomatology and deficits in the client (Jarrett et al., 2012). Gadow et al.'s (2007) hypothesis states there would be a clear-cut pattern of differences between participants with ODD and/or ADHD symptoms and greater impairment, and a control group with no symptoms. Gadow et al. (2007) looked at participants who show symptoms of ODD without ADHD, and those with a diagnosis of both ODD and ADHD on an Adult Self-Report Inventory-4 (ASRI-4). The research found that children who have both diagnoses were impacted far more in their daily functioning than those with only one diagnosis. Gadow et al. (2007) goes on to state that knowing the co-occurring symptoms can help improve treatment and quality of life for this population. Identifying treatment strategies for adults can also be applied to adolescents in helping to improve coping skills that can carry on into adulthood.

Jarrett et al. (2012) believe children with ADHD and a co-occurring diagnosis of anxiety can present a greater inattention to impulsivity. With both diagnoses, ADHD stimulates the hyperactivity and ODD emphasizes emotions, while both causes impulsive behavior (Jarrett et al. 2012). Jarrett et al. (2012) found that children who are diagnosed with ADHD and symptom of

anxiety have a greater chance of having impaired working memory. Having this diagnosis can affect many aspects of their lives, making school and employment difficult. It is difficult having one diagnosis, two or more co-occurring diagnoses can diminish a person's quality of life and also reduces their everyday functioning.

Oppositional defiant disorder with co-occurring diagnoses. Individuals with an ODD diagnosis have difficulty in regulating emotions, which may categorize ODD as an emotional disorder rather than a behavior disorder. Historically, ODD was placed in the category of disruptive behavior disorder; however, recently it has been recognized as an emotional regulation disorder instead (Cavanagh et al., 2014). In their study, Cavanagh et al. (2014) study acknowledges the dysregulation of emotions with those diagnosed with ODD. They found that male children diagnosed with ODD were more likely to present with anxiety and depression in their adolescence or adulthood. Cavanagh et al. noted those diagnosed with ODD fall into one of two dimensions: irritable or headstrong. The first dimension, irritable, led to anxiety disorder and the second dimension, headstrong, leads to conduct disorder, substance abuse, and depression. ODD is connected with a significant psychopathology of additional diagnoses later in life and will need to be a focus in early treatment. These researchers found three key factors for ODD which include: oppositional behavior, negative affect, and antagonistic behavior. Knowing these three key factors helps understand ODD's main struggles and what needs to be focused on in a treatment.

The diagnoses of ODD and/or ADHD, according to Kita and Inoue (2017), can have risk factors impacting self-esteem and self-perception, resulting in depressive symptoms. Kita and Inoue used three assessments in their research to identify associations between ADHD/ODD symptoms with self-esteem, self-perception and depression. They concluded that the inattentive

symptoms connect with decreased self-esteem, scholastic competence, and athletic competence. Hyperactive-impulsive symptoms connect with self-perception concerning behavioral conduct. Their research showed depression was strongly connected with low self-esteem, social acceptance and physical appearance. ODD symptoms were closely related to depressive symptoms while ADHD symptoms were related to depression through self-esteem, effecting the participants' quality of life.

Does being diagnosed with ADHD and/or ODD impact academics?

It has been reported that children who are diagnosed with ADHD present academic difficulties, discipline problems at school and home, and conflicts with peers (Evans, Timmins, Sibley, White, Serpell, & Schultz, 2006). Possible outcomes for adolescents with ADHD are school dropout, family conflict, serious social impairment, failing grades, and problems having a job (Evans et al., 2006). Andreous, Riga and Papayiannis (2016) assessed students with ADHD to view their writing performance based on technology and gender impact. Through their research it was found students had difficulty completing simple tasks. The use of Information and Communication Technology, computer activity, had a positive effect on the student's performances (Andreous et al., 2016). The process and interaction between the students with ADHD and others varied based on the persons involved.

There is a lack of research on ODD and the impact on academic difficulty. Pardini and Fite (2011) researched ODD, ADHD and additional diagnoses symptoms, and how they predict the psychosocial outcomes, including academics. Academic difficulties for those with ODD, only showed these problems when there was a co-occurring symptom of ADHD. ODD symptoms predicted increasing levels of anxiety and depression towards academic difficulties (Pardini & Fite, 2011).

History of Previous Treatments for ADHD and ODD

Treatments for children with ADHD have been reported and vary by student and the characteristics of the system in which they are involved (Bussing, Zima, Gary, & Garvan, 2003). Bussing et al. (2003) suggest that family-based interventions can be beneficial for both the adolescents and family members involved in the adolescent's life. Researchers suggest three types of family-based treatments including parent training in behavioral management skills, structural family therapy, and behavioral-family systems treatment (Evans et al., 2006). These treatments have been suggested since 1992, and it has been suggested they should be updated (Evans et al., 2006). Bussing et al.'s (2003) approach to treatment used telephone interviews with parents, along with follow-up home interviews were conducted a year or two after. The researchers suggest different evaluations that can be used as well as a variety of services for children with ADHD. The services these researchers include were lunch services, health insurance, routine pediatric care, and special education. In this study, researchers found parental recognition of a possible behavior problem among young school students have a higher risk for being diagnosed with ADHD (Bussing et al., 2003).

Multimodal Treatment of ADHD has been used in the past, and researchers have been looking to improve this method of treatment (Jarrett et al., 2012). ADHD has a high co-occurring diagnosis rate, making treatment difficult and individualized. Enns et al.'s (2017) study of multimodal treatments provides multiple programs and resources for children and adolescents with ADHD. The services that have been suggested for these clients are individual therapy, parent support, group therapy, education, and medication management with a multidisciplinary team. Enns et al. (2017) look at these programs to determine which would benefit participant's needs. They determined participants receiving ADHD services had a higher

enrollment in age appropriate grade after finishing the intervention. From this study a multimodal intervention resulted in positive health and education outcomes. Enns et al. (2017) determined that including medication treatment was a key component in the evidence-based care for ADHD participants. There is a lack in research on ODD's past treatment history, aside from medication.

Medication Treatment. There is not just one medication that is used for the treatment of ADHD and/or ODD. Heins et al. (2016) focused on three main medication treatments: amphetamine, methylphenidate and atomoxetine. The purpose of their research was to determine which combination of medication worked best when considering age, sex, and specific diagnosis. Their research indicates children identified with concentration problems were four times more likely to be prescribed medication (Heins et al., 2016). From a classroom perspective, students with concentration problems become distractors for the remaining students, resulting in a high number of students being medicated for control in the classroom setting. It was shown by Heins et al.'s (2016) research that if a participant had at least one parent or sibling with ADHD who was being medicated, the participant would also be medicated. Families already familiar with treatment including medication are more likely to be open to the use of medication to control symptoms. The study also found children with hyperactivity symptoms had between a 61% and 76% chance of being medicated (p. 489). Children with behavioral concerns were medicated between 4% and 28% of the time (p. 489). The major symptoms that effected the child's learning and functioning were hyperactivity and concentration problems, causing these children to be more likely to be medicated (Heins et al., 2016).

Hogue, Lichvar, and Bobek (2016) piloted the evaluation of the Medication Integration Protocol (MIP). MIP was designed to treat adolescents diagnosed with ADHD and help

behavior therapists take a leadership role in educating teens and caregivers about the symptoms of ADHD and any related characteristics. This model assists families' decision making on whether to medicate or not. Hogue et al. (2016) states medication should be the first-line of treatment for ADHD in adolescents. Ritalin, a type of methylphenidate, is a commonly used extended-release stimulant medication for ADHD. Ritalin and Concerta, another type of methylphenidate, have proven consistently effective in reducing ADHD symptoms and improving social and academic functioning (Hogue et al. 2016). Hogue et al. (2016) state that the media emphasizes that ADHD medications are increasingly over prescribed for the youth; but in reality, only half of adolescents who meet the full diagnostic criteria for ADHD are being medicated. Medication is typically suggested or prescribed because of parenting and classroom behavioral management. The medication reduces the symptoms of hyperactivity or distractibility allowing the student to be more available to instruction. It can also increase positive peer interactions by reducing impulsive negative behaviors.

With the MIP design the adolescents and caregivers make informed decisions about medication and for those who select medication, it supports their decisions about ongoing participation and compliance with the medication regimens (Hogue et al., 2016). MIP is used to educate the families involved, giving them a better understanding so that they can make an informed decision for their child. The information provided can ease the minds of caregivers and help them to understand what their child is experiencing. This can then lead participants to seek additional suggested treatments. Continuing to understand the treatments available, how the human mind works, and how it can be affected by adding these treatments, will help guide decision making for the best line of treatment.

Researchers have also looked at other interventions that are non-pharmacological and found if these interventions are not successful then medication treatment is typically initiated (Bachmann et al., 2017). Bachmann et al. (2017) warned against the lack of data concerning the safety of prescribing ADHD medication with young children. While the researchers mention non-pharmacological interventions, they provided no specific information as to what those interventions were. The study focused on ADHD medication usage with children and adolescents in the United States and other countries. It was found that from the year 2005 to 2012, in the United States and in other countries, there has been an increase in ADHD medication usage. In the United States in 2005, there were 3,869 documented participants taking ADHD medication (p. 486). By 2012 the documented participants increased to 105,188 participants taking ADHD medication (p. 486). For all of the countries in the research, including the United States, the highest usage of ADHD medication was between 10 and 14 years old. Bachmann et al. (2017) show that medication has increased over the years, but there is no suggestion if medication use have been successful. The research went on to suggest having an alternative intervention as the first line of treatment. Unfortunately, the researchers did not suggest what those alternate interventions would be.

Both positive and negative results need to be evaluated when considering medications. Cox et al. (2015) look at both the positive and negative consequences of taking ADHD medication. It has been presented in a positive attitude towards medication. There is more research on ADHD medication being successful, than on its negative aspects. Cox et al. (2015), used a design in their research to capture the positive and negative attitude towards medication usage with participants diagnosed with ADHD. In order to create a norm for the data, researchers noted all of the medication that was used, scoring the most used to the least used

medication. Cox et al. (2015) required participants to respond whether they were taking medication, what dosage they were taking, and how many times per day or days per week they used the medication. Because there were specific questions, participants did not elaborate on their symptoms from the ADHD medication other than answering the questions that were provided for them. The questions focused on dependency of the medication and/or negative changes in personality. Cox et al.'s study it confirmed a high number of participants who received medication had negative changes in personality.

Patel and Barzman (2013) states adding stimulants as a treatment for ADHD can help decrease aggressive behaviors. They go on to say children with the aggressive ADHD symptoms are limited to treatment (Patel & Barzman, 2013). Aggression has many subtypes including covert, overt, impulsive, and predatory, which are frequently difficult to distinguish. This makes it difficult to identify the best form of medication treatment, or combination of treatment. If the aggressions are not treated, the adolescents have a higher risk of a poor long-term outcomes. Aggression is not the main symptom as part of the DSM-5 criteria for ADHD but is listed as one of many (Patel & Barzman, 2013). Medication has shown progress and success with ADHD symptoms of attentiveness and focus; however, there is less researched on aggressive symptoms because of the multiple factors included. Patel and Barzman state several other studies found adding stimulants in the treatment of aggression in children with ADHD have been successful.

Potential Treatments

Active visual arts therapy. Koch (2017) looked at the active art-making process, to determine if the creator connects the active, or expression, and the receptive, or impression, aspects of the experience. Koch (2017) describes the art process as being grounding for the clients, allowing them to create an art piece and place the emotions in the environment. All of

the art work made becomes part of the client's expression and healing process. Koch further looked more into three levels of the arts: cognitive symbolizing, affective symbolizing, and transpersonal symbolizing. Cognitive symbolizing focuses on art as a structure, gaining a cognitive control over a subject. Affective symbolizing focuses on art as self-expression, emotional expression and regulation on an interpersonal level. Transpersonal symbolizing uses art to connect the bigger focus, including spiritual function such as God. Included in all of these levels is the social function of symbolizing (Koch, 2017). There is so much more to art therapy when working with clients than just the creation of a piece of art. The process of art therapy is what makes the impact on the clients.

According to Zupančič, Čagran, and Mulej (2015), it is important to represent other stimuli aside from strictly academics in the curriculum for students. Zupančič, Čagran, and Mulej (2015) introduced Slovenian kindergarteners to their curriculum, which is based on the fields of language, movement, nature, society, art, and mathematics. The researchers had knowledge of Early Child Development and children's needs which must be met in order for the children to be successful in a school setting. The researchers state that "artistic expression enables the child to develop various potentials: creativity, imagination, conceivability, sensitive perception, and conceptions" (p. 14), which is very important in a child's development. The children gain an understanding of their space, which is complex and intertwined. These visual art activities worked on the development of their visual thinking, parts of thinking that relates to spatial relationships, distance, and overlapping (Zupančič, et al 2015). The development of these skills, through active art therapy may directly impact the children's social and coping skills.

With adolescents with ADHD and ODD, physical activity can be useful for letting out and directing their energy, but it can also heighten stimulation. Students at my internship

express being over stimulated and having difficulties regulating their behaviors and coming down from the heightened activity. Having the client work on a stimulating activity through active art therapy that does not heighten their activity level but works with their current energy level will assist in the client being able to regulate their energy to an appropriate level.

Play therapy. Play therapy was developed to work with children who are struggling with mental health. Areas of focus include internalizing and externalizing behaviors, disruptive behaviors, caregiver-child relationship stress, and self-efficacy (Stutey & Wubbolding, 2018). Stutey and Wubbolding (2018) recognize two interventions, child-centered play therapy (CCPT) and Adlerian play therapy (AdPT). CCPT works well with children with broad-spectrum behavior problems, which children who are diagnosed with ADHD and ODD often display. AdPT works to build rapport and trust in a play setting. Adolescents in many situations can struggle with trusting adults and others when first entering their lives. Building rapport and trust between the therapist and adolescent is an important process in therapy. Play therapy is responsive to their unique and varied developmental needs (Davis & Pereira, 2013). AdPT can benefit the relationship between the adolescent and their parents or guardian. Children with ADHD and/or ODD often show symptoms before school age, meaning the parents have been challenged by these behaviors for a period of time (Chen et al., 2017). It becomes stressful on the parents, causing friction between teacher and parent, and parent and child. Art and play therapy are strategies for the adolescents in therapy sessions, but it also an opportunity for relationship building for the parents and child, and positive interaction.

Art therapy and medication treatment. ADHD is the most common psychiatric diagnosis in children working with art therapist (Dere-Meyer, Bender, Metzl, & Diaz, 2011). Medication is the most widely used treatment, and side effects, including over prescribing of

medication and an increase in negative behavioral issues can be problematic (Dere-Meyer et al. 2011). Stimulant medication only provides short-term relief and does not permanently improve social and emotional struggles. Combining medication with art therapy gives a conjunctive treatment, whereby the combination addresses and improves socio-emotional issues involved with ADHD. Creating art gives a visual portfolio, or permanent record of the individual's emotional and behavioral experience. Dere-Meyer et al. (2011) quoted Safran (2002) "art is an activity that uses what are often stronger visual learning skills to lend structure and give people who tend not to be contemplative a way to express their feelings in therapy" (p. 33). This intervention helps individuals with ADHD to work on the behaviors needed to increase positive behaviors and decrease negative behaviors. This study revealed both cognitive behavioral art therapy and *art as therapy* had positive effects on children with symptoms of ADHD. These participants were able to draw aggressive pictures with the directive of *aggressive play*, and gradually with time use the art to express positive feelings. The study supported the use of art therapy as a treatment for addressing ADHD symptoms and possibly reducing the need for medication. It also discusses the need for ongoing evaluation and communication of children's needs (Dere-Meyer et al., 2011). Art therapy is a suggested treatment for adolescents with ADHD because tasks can be adjusted to be age appropriate and developmentally sensitive; and, art therapy provides a permanent record that can be used throughout the course of treatment. This is a non-judgmental tool where the client is supported in making conscious choices like exploring feelings and concerns that are typical barriers in optimal treatment. Art therapy can be effective in helping adolescents learn to regulate themselves. This treatment can provide a more wholesome and sensitive process of exploring specific topics that relate directly to the student's needs. Art therapy brings a holistic perspective to the treatment that addressed mental health

needs that medication does not. Unfortunately, there is very little research focused on the combination of medication and art therapy for the treatment of ADHD Dere-Meyer et al., (2011).

Discussion

This literature review assesses the relevant information concerning different components that occur during ADHD and ODD treatment including diagnosis, medication, art therapy treatments, and the combination of art therapy and medication. This literature review focuses on art therapy and medication, specifically, because of limited research. When looking for research specifically on ADHD and/or ODD, I found that the focus is frequently on medication as the primary method of treatment. There is limited research on treatment planning without the component of medication. The research reviewed supported my hypothesis that adolescents with ADHD and/or ODD benefit from an active visual arts therapy as part of their treatment.

Multi-task art activities greatly benefit and reduce the impact of symptoms of hyperactivity, giving adolescents a resting point. Given the flexibility and variety of tasks, art therapy provides opportunities for movement, both large and small, can be engaging and creative, while providing a strategy for coping with adversity. In my observations, students with ADHD who visit the art room at my internship have demonstrated positive behaviors and a decrease in the negative behaviors during the activities. In the regular classroom setting, the adolescents continue to demonstrate high rates of difficulty with interacting with peers, teachers, and completing tasks, which may be due to the inflexibility and decreased ability for movement. The students are still struggling with transferring the positive behaviors seen in the art room setting to the classroom setting.

This literature review supports a more multimodal approach for treatment. I believe having multiple components to the treatment, such as applying the practices of art therapy, will be more effective in decreasing their inability to focus or keep interest. While there is clear evidence of the benefits of medication treatment (Dere-Meyer et al., 2011), there is clear

evidence that chemical treatment works best in combination with developing therapeutic coping skills. Combining medication with a form of art therapy results not only in reducing problematic behaviors but also supports development of strategies and coping skills. Long-term treatment that relies solely on adolescents being medicated does not support growth in gaining the coping skills needed to further them in the working world. There is a significant lack of research on ODD with medication and ODD as a general topic. The only type of treatment for ODD symptoms and diagnosis that has been researched significantly is medication. ADHD is more commonly studied because it is more commonly diagnosed. There is a significant difference in the amount of studies focusing on participants with ADHD then on ODD.

Based on the research used for this literature review, all the studies presented successful treatment interventions for lessening the disruptive symptoms for the participants. There are not enough studies that reported unsuccessful interventions to help learn from mistakes or other factors that could be influencing the interventions. Reviewing interventions that were successful is helpful but also reviewing unsuccessful interventions can be beneficial when determining treatment plans.

The studies used for this literature review discussed both children and adolescents. The articles focusing on children discussed early interventions and can be adjusted to work with adolescents if needed. Adolescents who have not developed coping skills can begin with interventions that have been used with children since developmentally their coping skills may be at that same level. The research supports the idea that children and adolescents benefit from treatment plans using art therapy to develop coping skills and self-regulation.

From personal experience at my internship, the students who have been diagnosed with ADHD and/or ODD are medicated but continue to struggle in the classroom, academically and

socially. These adolescents access art therapy as an *in the moment* coping skill; while creating art they demonstrate focus while being engulfed in the process of creating. Certain techniques that have more movement and action while creating increase their ability to keep their attention. Using one method of treatment will not benefit this population; plans need to be developed which provide the student with a variety of strategies. Art therapy gives a flexible treatment that can engage adolescents while continuing their behavior plans.

Through self-reporting and staff observation, some students have shown ADHD negative symptoms and impulsive behaviors subsided upon stopping medication. While on the ADHD medication, one student showed a loss of impulse control, engaging in behaviors such as punching walls and doors, walking out of the classroom without permission, and more aggressive behavior. Since stopping the ADHD medication, this student has shown less physical, impulsive behavior and is applying coping strategies such as asking permission or requesting a walk when needing a break out of the academic classroom.

In conclusion, this literature review discusses that art therapy with medication has been a solution that works best for this population. While medication is the first step for majority of cases, medication alone does not help with the individual's coping skills or building emotional skills. The literature supports a more comprehensive approach that includes art therapy. This approach keeps students involved and engaged in their treatment plans, while developing strategies to reduce problematic behaviors. For students that struggle with structure and boundaries, art therapy gives them a flexible plan that allows them some control over their own treatment.

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