

The effectiveness of art therapy on depression in adolescents

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Abstract. Adolescents' depression has surged due to academic, social, and identity pressures, yet traditional verbal therapies often tend to be insufficient due to adolescents' reluctance to disclose emotions. Art therapy, utilizing non-verbal mediums such as painting and mandala drawing, offers a safe way for emotional expression. It particularly serves the adolescents' communication and self-expression preferences. Studies across school and clinical settings demonstrate the efficacy of art therapy. School-based interventions reduced bullying and pandemic-related stress, and clinical trials showed decreased anxiety in cancer patients and improved social cohesion in personality disorder groups. Cultural relevance, such as Turkish calligraphy or Korean immigrant-focused sessions, enhances therapeutic engagement by addressing identity conflicts. Despite promising outcomes, further research is needed to standardize protocols and explore long-term effects. Art therapy emerges as a vital complementary tool in mental health care for adolescents.

1 Introduction

In recent years, adolescents' depression has become more common. Young people are developing their personalities while facing increased mental pressures from school, social life, and personal growth. These mental health problems are often ignored and can lead to lower grades and trouble fitting in. Traditional therapy methods often meet the problem that many teens feel embarrassed or do not want to talk about their feelings. Art therapy is becoming a new option. It lets teens express themselves without words by using art such as painting or drawing. This method creates a safe way for them to share emotions, which matches how the majority of teens prefer to communicate. By allowing indirect but honest self-expression, it works well with regular therapy. Because it is flexible, teens can deal with difficult feelings without having to explain them directly. This might make them more likely to participate compared to talk-based therapy. This method is especially useful for today's teens. It gives therapists another way to help with the rising mental health crisis. Using it could help close the gap between what teens need emotionally and the support they currently get.

Moreover, more studies now focus on art therapy for mental health issues [1]. Re-search shows it can be effective as a supplementary treatment, especially for painting-based methods. For example, patients might do free painting or follow themes like self-portraits. This helps

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them express emotions or feel relieved while creating or viewing art. As a treatment without medicine, art therapy both helps emotions and aids diagnosis. Future studies need to focus on better clinical trials, how it works, and creating standard methods. At the same time, teen mental health is affected by many things like weight problems, low self-esteem, family issues, school stress, social pressures, and drug use [2]. These connected factors make mental health challenges harder during adolescence. Also, teens' still developing cognitive skills make them easily influenced by others. Stress from school, family expectations, and friendships often leads to anxiety or behavior problems.

Art therapy is an emerging complementary therapy method. It shows promises for treating conditions like depression, anxiety, and autism in people of all ages. This approach works especially well for teens, who often resist talking openly about their feelings. As a non-verbal method, art therapy sidesteps the need for direct conversation. Teens and therapists build trust gradually through creative activities such as drawing or painting. Art materials provide a safe way for teens to express complicated emotions indirectly. This process lets them maintain emotional boundaries while sharing. Unlike traditional talk therapy, this method reduces defensive reactions common in teens. The unique interaction style makes art therapy a standout option in youth mental health care. It gives clinicians a new way to connect with reluctant adolescents. Recent studies support wider use of art therapy in teen programs. Experiments in the following content shows art therapy help teens process emotions gently by painting, embroidery and calligraphy in the school and clinical, improving treatment results. Moreover, Culture also plays an important role in the art therapy for adolescents. These findings highlight opportunities for both therapists and researchers to explore further.

2 The effectiveness of art therapy on clinical and non-clinical populations

2.1 Art therapy in schools

In recent years, the mental health issues of students have received increasing attention, and traditional psychological interventions often face limitations, especially for students who have weaker expressive language abilities. Art therapy, as a non-verbal means of expression, has gradually become an important auxiliary in the school's mental health support system. This characteristic gives it a unique advantage in dealing with psychological pressure caused by campus bullying, behavioral problems, and sudden public events such as pandemic isolation.

A previous study by Regev tracked 44 Israeli students over six months to understand how art therapy works in schools [3]. Thirty-two therapists documented weekly changes in children's engagement levels, creative problem-solving through art (e.g., drawing personal experiences), emotional expression (such as using color choices to show moods), and behavior of resistance (including refusing to participate). Results showed significant improvements in participants' "cognitive-behavioral exploration" and "emotional exploration," while "resistance behaviors" and "self-insight" demonstrated no notable changes. In addition, the results show that the degree of active participation in therapy directly correlated with reduced anxiety and depression. This finding suggests that when children actively express inner feelings through art therapy, they may more effectively release negative emotions, thereby alleviating psychological stress.

Interestingly, even temporary resistance played a role. Some children initially refused to draw, but according to the final result, it eventually related to positive changes. Researchers suggested this might reflect children gradually lowering psychological defenses and adapting

to therapy, indicating that fluctuations during treatment could represent normal adjustment processes.

Notably, the research challenges assumptions about "perfect participation." Contrary to expectations, some beneficial outcomes correlated with phases of increased resistance, emphasizing the need to recognize non-linear progress in child therapy. A child who initially rejects to participate might be affected positively after finding personally meaningful themes. These findings advocate for flexible implementation of school-based art therapy that accommodates individual pacing and diverse response patterns.

The above research proves that art therapy is feasible in schools. When it comes to online, it is important to examine whether art therapy is still effective. Based on the background of the COVID-19, researchers carried out a pilot study on 22 primary school students in Canada to verify the feasibility of online art therapy [4]. In this study, students were randomly divided into two groups: one group underwent an "emotion-based directed drawing intervention" (such as drawing feelings during the pandemic), and the other group underwent "mandala drawing intervention". Both sets of art therapy were completed through a 45-minute online course every week, which lasted for 5 weeks. The research results indicate that both groups of interventions showed a possibility to improve adolescents' mental health in the context of covid-19 pandemic. At the same time, the emotion-based directed drawing group showed significant improvement in attention issues compared to the mandala drawing group. Researchers have pointed out that emotional guidance activities, such as having children draw their "most fearful moments", can more directly guide children to express their sources of negative emotions, thereby helping them alleviate the pressure from the pandemic. In contrast, although mandala drawing can bring a certain relaxation effect, it lacks deep emotional expression and cannot solve emotional problems from the root. In addition, the high participation rate in online mode supports that even without face-to-face interaction, children can still complete treatment through digital tools. This discovery provides new ideas for schools to maintain students' mental health services during sudden public health emergencies.

The above research proves that both online and offline school-based art therapy is effective. At the same time, in the school-based research, bullying is an important factors that can be ignored. For those students who are excluded or bullied, it is unclear if art therapy is still helpful. In China, Yan and colleagues investigated how art therapy could help reduce bullying among rural left-behind children (LBC) who separated from parents for over six months [5]. This study included 603 children aged 10-12. Among them were 272 left-behind children (LBC) and 331 non-LBC children from six schools. Researchers focused on 180 LBC children who faced bullying. They divided these children into three groups. One group tried mandala drawing therapy. Another received standard counseling. The third group had no special program. Over three months, the art therapy group attended six sessions. Therapists used themed paintings in these sessions. The activities helped children identify bullying situations and learn coping methods. Meanwhile, the counseling group had traditional talk-based sessions. After the program, researchers used surveys to measure results. They found clear differences. The art therapy group reported fewer bullying incidents and higher confidence. The counseling group showed little change. Notably, boys aged 12 and older showed the strongest improvements. Researchers suggest that it is because adolescents are better at using symbolic elements in their artwork, suggesting they could process complex emotions more effectively through visual metaphors than verbal discussion. The study also uncovered an important chain reaction: improved school satisfaction served as the bridge connecting art therapy participation to reduced bullying. This implies that creative activities helped rebuild children's trust in their school environment. These findings demonstrate art therapy's unique value for vulnerable populations.

These studies confirm the diverse applicability of art therapy in school settings. Behavioral intervention for Israeli children shows that continuous artistic creation can significantly improve cognitive and emotional expression ability and reduce introverted problems such as anxiety. Emergency practice during the COVID-19 epidemic further proves that even if it is switched to online mode, directional design artistic activities can effectively alleviate children's attention deficit and epidemic related pressure. It is worth noting that in special groups such as left behind children in rural China, art therapy not only reduces the rate of bullying, but also helps children rebuild their trust in school by improving their self-esteem and satisfaction with campus life. These results prove art therapy's value, and it deserves to be promoted in the school-based mental health support system.

2.2 Art therapy for adolescents with clinical conditions

In the clinical treatment of children and adolescents, physical illnesses and psychological problems often simultaneously plague these adolescents, forming complex challenges. Children with cancer suffer from the pain of chemotherapy and the loneliness of isolation, while adolescents with mental illnesses are trapped in emotional crises of anxiety and self-doubt. Traditional drug therapy and psychological intervention have achieved certain effects, while art intervention, as an auxiliary treatment method, has also demonstrated excellent results.

The study by Gürcan & Atay Turan demonstrates how structured art therapy (mandala drawing) significantly reduces psychological distress in adolescents undergoing cancer treatment. Hospitalized teenagers often feel extreme stress [6]. Long stays and intensive treatments regularly cause anxiety or depression. A trial tested art therapy with 60 hospitalized teens. Half did mandala art sessions, while the rest received standard care. Mandala art involves creating circular patterned drawings. Combined with soothing music, it gave teens a calming, focused activity. Results showed clear improvements: The art group saw drops in anxiety and depression scores. Their mental health symptoms also improved sharply. Experts think this worked because mandalas do two things. First, the creative process distracts from pain. Second, the structured designs create a sense of order in the chaos of hospitals. Unlike free-form art, mandalas have clear rules. This predictability may comfort teens feeling overwhelmed. Meanwhile, teens in regular care got worse emotionally. This suggests hospitals often miss teens' emotional needs. The study only lasted five days, so it is unknown if the benefits would last long. However, it shows even short art sessions can help quickly. For teens with cancer, mandala drawing might support medical care by addressing both mind and body—key to whole-person healing.

In the above study, art therapy was proved to be effective for adolescents diagnosed with physical diseases, then in the next research, its impact on the mental diseases will be discussed. Researchers evaluated the impact of group art therapy combined with music on adolescents diagnosed with cluster A/B personality disorders, in which A includes eccentric disorders like paranoid and schizoid, and B includes dramatic and emotional disorders like antisocial and borderline, in Italy [7]. The study involved nine adolescents in a residential rehabilitation center, focusing on improving group cohesion, reducing conflict, and enhancing emotional expression. The participants struggled with interpersonal isolation and emotional dysregulation, which are typical of personality disorders. An 18-week art therapy program was implemented, involving weekly 90-minute sessions. Activities included drawing while listening to music, followed by group discussions. The questionnaire was used to measure involvement, conflict, and avoidance. Statistical analyses compared pre-post scores (participates' emotional climates) which were measured in the 1st and 2nd cycle and differences between two intervention cycles. Following the intervention, significant reductions in group conflict and increased involvement were observed. It is worth noting that

some participants initially showed a brief increase in avoidance behavior, but as the intervention progressed and trust relationships were gradually established among group members, group conflicts decreased. Researchers speculate that this may be an instinctive reaction of adolescents when faced with unfamiliar social situations, and artistic activities provide them with a "safe distance" - they can observe others' creations first and then gradually participate. Thus, it established a sense of security. This progressive social training is particularly suitable for patients with personality disorders.

The studies above show that art therapy plays a role in benefitting clinical treatments, in the study by Wolk & Bat Or, they assessed the therapeutic aspects of embroidery in art therapy among adolescent girls residing in a post-hospitalization boarding school in Israel [8]. The study focused on girls aged 15–18 with emotional disorders, including depression, anxiety, PTSD, and self-harm tendencies. These participants engaged in weekly embroidery sessions within an open studio art therapy program for 12–24 months, aiming to explore how embroidery facilitated psychological recovery and self-expression in this vulnerable population. Researchers used an in-depth qualitative method combined with Youth Participatory Action Research. This approach asked participants to help analyze what they experienced. Participants chose their own embroidery materials. They sat near therapists, working on embroidery while talking during sessions. The study lasted 12 to 24 months. Results highlight art therapy's strong effect on serious mental health issues. Over time, their embroidery style changed. Early sessions showed them closely following patterns. Later, they began creating freely. This shift reflects a mental journey from needing control to embracing release. The findings suggest long-term art therapy lets teens explore emotions deeply. Short-term programs often miss this depth. Such projects require time to conceptualize and execute, fostering patience and resilience. The repetitive nature of stitching also serves as a somatic coping mechanism; the rhythm of needlework can regulate heart rate and intrusive thoughts. Importantly, completed artworks become tangible proof of progress, counteracting feelings of stagnation common in chronic mental illness. While short-term studies (like the 5-day mandala trial) show the relief of some symptom longitudinal approaches like embroidery therapy demonstrate art's capacity to re-build identity and agency over time. This is crucial for adolescents, whose developing brains can benefit from consistent interventions.

In the study by Sarman & Günay, it is proved that the cultural relevance is a key for art therapy in adolescents diagnosed emotional disorders [9]. The research focused on adolescents diagnosed with clinical anxiety or depression, testing whether calligraphy—a traditional Turkish art form infused with spiritual motifs—could alleviate symptoms. Using a randomized con-trolled trial design, the researchers compared a calligraphy intervention group with a waitlist control group. Participants in the intervention attended three weeks of 60-minute sessions that taught calligraphy techniques while promoting creative self-expression. Standardized questionnaires measured anxiety and depression levels before and after the intervention. Results showed the calligraphy group experienced greater reductions in state anxiety, trait anxiety, and depression compared to the control group. This outcome likely stems from calligraphy's deep roots in Islamic culture within Türkiye. By writing religious phrases and proverbs, participants appeared more receptive to the therapy, lowering their resistance to psychological support, thus expressing their emotions and assisting in the implementation of psychological interventions

These four studies collectively indicate that art therapy can be adapted to diverse clinical needs through different forms. Structured interventions, such as mandala painting, have shown immediate effects of short-term art therapy, demonstrating their effectiveness in helping clinical children support overall recovery at a psychological level. Art with cultural relevance, such as calligraphy, can not only provide emotional outlets, but also help adolescents find balance in multiple generational identity conflicts, which is particularly

important for adolescent patients in a critical period of self-identity. The gentleness and gradual nature of art projects created by groups can help improve the social functioning of individuals with social impairments. The experimental project of embroidery demonstrates that long-term art projects can provide a sustained emotional container, supporting their gradual reconstruction of themselves.

3 The role of culture in the effectiveness of art therapy

As mentioned in the above viewpoint, culture, as the core of individual identity recognition in the globalized contemporary society, profoundly influences the support and intervention of adolescent mental health. The effectiveness of art therapy is often closely intertwined with cultural background. The differences in aesthetic concepts and emotional expression in different cultures may have a significant impact on the construction of self-identity among adolescents. For example, individuals in collectivist cultures tend to define themselves through group belonging, while individualistic cultures emphasize independence and uniqueness. This cultural characteristic is particularly prominent among immigrant youth. For immigrant youth, their original cultural background often collides with the cultural values of the destination, leading to identity confusion and anxiety. In this context, art therapy should pay more attention to cultural sensitivity and consider cultural identity as a part of therapy, leveraging the advantages of art activities as a medium that can overcome language, culture, and other barriers. Studying the mechanism of culture in art therapy is not only the key to improving cross-cultural psychological intervention, but also an important means to help immigrant adolescents achieve self-identity reconstruction in cultural collision.

A previous study assessed the efficiency of art therapy in reducing depression, anxiety and stress among a small sample of Korean immigrant youth using a quasi-experiment design [10]. This study targeted the Korean immigrant youth experiencing the acculturative stress, like language barriers, cultural adjustment and family separation. A quasi-experiment(one-group pre-, post-test) design was used with about 25 young participants. All the participants received the weekly art therapy sessions in five weeks. The participants were given a space which was related to their original cultural environments to explore themselves. The Questionnaire and Stress Scale were used as psychological measures to ascertain the anxiety and stress of participating of the project, as well as to assess acceptability and satisfaction before and after the whole experiment. According to the results of the experiment, both the severity of depression and perceived stress levels were improved, and the severity of depression remained stable at the three-month follow-up. and the acceptance rate shows that most participants found art therapy useful and more than half found it enjoyable.

The researchers suggested that for immigrant youth struggling with language barriers and unfamiliar social norms, the familiar setting likely reduced feelings of isolation. Being surrounded by symbols, aesthetics, or practices tied to their original cultures may have provided a sense of safety, allowing them to express emotions they might otherwise suppress. This cultural "anchor" could explain why participants reported reduced anxiety and stress—they felt seen and understood, not just as patients, but as individuals navigating a dual identity.

4 Conclusion

Art therapy shows strong potential for helping teens with depression in different settings. It is helpful for adjusting and releasing emotional pressures in schools and promoting medical treatments for clinical adolescents. in Studies in Israel and China found it reduces stress caused by bullying or pandemics. It works by encouraging emotional expression and self-reflection. Clinically structured methods like mandala drawing ease distress for teens

undergoing treatment. For girls with long-term mental health struggles, long projects like embroidery help rebuild confidence and control. Cultural tweaks make art therapy even more effective. For example, Turkish teens used calligraphy to calm anxiety. Korean immigrant teens did art tied to their heritage, which helped resolve inner conflicts about identity. Research shows art therapy does two things well: it helps teens express feelings and gives therapists clues about their mental state. This is especially useful for teens who struggle to talk about emotions. The method's adaptability lets therapists tailor it to personal or cultural needs. Adding art therapy to school programs or clinic plans could give teens a safe way to process emotions. This builds resilience and improves mental health over time. Future work should focus on expanding these programs while keeping them culturally sensitive. Doing this could greatly increase their effectiveness.

Current research on art therapy for teen depression has some gaps. Many studies use small groups of teens or run for only a short time. This makes it hard to know if results apply broadly or last long-term. Cultural differences are also not studied extensively. Research focuses on single regions. Another issue is how outcomes are measured. They often depend on teens' own reports, which might not be fully accurate. Researchers aren't sure how exactly art therapy reduces symptoms, and there's no standard way to run sessions. This makes it tough to repeat studies or compare results. To improve, future work should use bigger groups and track teens over the years. This could confirm lasting benefits and create clear treatment guidelines. Comparing methods across cultures would show what works everywhere versus what's unique to certain groups. Finally, mixing digital tools with traditional art methods might make therapy easier to access for more teens.

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