
Efficacy of Art Therapy on Anxiety among Adults in India

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Abstract

Aim: Art therapy as a medium uses various techniques for intervention in therapy. This study aimed to examine the effectiveness of art therapy on anxiety among adults, by using some of the various techniques of art therapy.

Methods: It is a mixed method quasi-experimental study, using before and after without control design. Participants ($n = 8$) level of anxiety was assessed before and after the intervention.

Results: Qualitative findings indicate that participants (a) were able to recognize the reasons for experiencing anxiety; (b) engage in remolding the distressful experiences; (c) de-clutter thoughts; and (d) were able to engage in mindfulness. Quantitative findings indicated that (a) level of anxiety was significantly reduced for the participants after the intervention; (b) there is a significant relation of art therapy intervention on anxiety; and (c) the effect size of intervention was calculated as large ($d = 1.57$).

Conclusion: The results suggest that some participants may need longer intervention to further reduce the level of anxiety and deal with various issues. Art therapy is an effective method to reduce anxiety among individuals. Various techniques used in the intervention may have improved the level of anxiety more effectively.

Implications for future research: For future research (a) more number of participants may be included for the study; (b) control group may be used to compare the effectiveness of art as compared with other mediums of therapy.

Keywords: Effectiveness, anxiety, art therapy, adults, intervention

Plain Language Summary

Anxiety refers to feelings of fear, discomfort, psychological tension, with other physiological symptoms like muscle tension, increased heart rate, dry mouth, abnormal breathing, sweating and trembling (Froggatt, 2003). Art therapy utilizes the art making process to address the mental health of clients of all ages and experiencing a variety of psychological or physiological issues (American Art Therapy Association [AATA], 2011).

This study examines the effect of art therapy intervention on anxiety among adults. Eight individuals completed the therapy, upon whom using the pre and post test was administered to assess the change in the level of anxiety.

The qualitative findings indicated that participants (a) were able to recognize the reasons for experiencing anxiety; (b) engage in remolding the distressful experiences; (c) de-clutter thoughts; and (d) were able to engage in mindfulness. Quantitative findings indicated that (a) level of anxiety was significantly reduced for the participants after the intervention; (b) there is a significant relation of art therapy intervention on anxiety; and (c) the effect size of intervention was calculated as large ($d= 1.57$).

Introduction

Anxiety refers to feelings of fear, discomfort, psychological tension, with other physiological symptoms like muscle tension, increased heart rate, dry mouth, abnormal breathing, sweating and trembling (Froggatt, 2003). As the level of anxiety increases the negative physiological and

psychological symptoms worsen, for example, chest pain, dizziness, nausea, fainting, diarrhea etc. According to the National Mental Health Survey of India, 2015-2016, the prevalence rate of anxiety disorders (2.1%) are one of the top 10 conditions within a single diagnosis in India (National Institute of Mental Health and Neuro Sciences, 2016). Many young adults are anxious about themselves, their relationships, and their future.

The most common treatments of anxiety disorders are cognitive behavioral therapy (CBT and/ or pharmacotherapy with benzodiazepines, tricyclic antidepressants, monoamine oxidase inhibitors and selective serotonin reuptake inhibitors (Hassink-Franke, et al 2012). These treatments appear to be only moderately effective. Pharmacological treatment causes side effects and a significant percentage of patients (between 20–50%) are unresponsive or have a contra-indication (Blanco, et al 2010; Hyman, 2010; Davidson, et al 2004). Combination with CBT is recommended (Bandelow, et al 2012) but around 50% of patients with anxiety disorders do not benefit from CBT (Nielsen, et al 2018).

As indicated by various studies, the efficacy of treatment for anxiety disorders is increased by the use of additional therapies in a clinical setting. An example is art therapy, which is integrated in several mental health care programs for people with anxiety (Drozdek, et al 2012) and is also provided as a standalone therapy. Art therapy is considered an important supportive intervention in physical and mental illnesses (Oster et al, 2006).

Art therapy utilizes the art making process to address the mental health of clients of all ages and experiencing a variety of psychological or physiological issues (American Art Therapy Association [AATA], 2011). Drawing as a technique in art therapy, when used with individuals having anxiety, helps the individual to explore himself through the means of self-expression (Malchiodi, 2005). Through the process of art, the individual gets an opportunity to step back, process the information through silent contemplation of the drawing he made and look within; this

fosters the awareness of his strengths, weaknesses and altered perspective by creating an image depicting his mental state (Malchiodi, 2005).

The process of art therapy aids an individual to share uncomfortable experiences and express his emotions and feelings, foster self-esteem and find solutions to their problems (Learmonth and Huckvale, 2001). The art process helps person to improve the ability to tell about his views, and be able to identify and manage feelings. Through the process of art therapy an individual can indulge in risk taking practices, embracing mistakes, developing new skills, increase tolerance, foster healthy imagination, and viewing new perspectives to a situation or problem, through the safety fostered in the process. It also helps an individual to develop emotional regulation and reinforce the positive emotions (Learmonth and Huckvale, 2001; Malchiodi, 2005).

Art therapy is believed to support patients with anxiety in coping with their symptoms and to improve their quality of life (Oster et al, 2006). Based on long-term experience with treatment of anxiety in practice, art therapy experts describe that it can improve emotion regulation and self-structuring skills (Morgan et al, 2012; Haeyen, 2005) and can increase self-awareness and reflective abilities (Ouwens et al, 2007). Another study reported patients experience a more direct and easier access to their emotions through the art therapies, compared to verbal approaches. As a result of these experiences, art therapy is believed to reduce symptoms in patients with anxiety (Haeyen et al, 2015).

A study conducted in India to assess the effectiveness of art therapy on anxiety among hospitalized children (Raj, 2016) found that in the experimental group 56.67% children had very high level of anxiety 43.33% had high level of anxiety in the pre-test. The post test conducted after the Dot Drawing Art Therapy intervention revealed that 70% had little anxiety and 30% percent had no anxiety. For the control group in the pre test, 60% had very high level of anxiety and 40% had high level of anxiety; in the post-test, 56.67% had high anxiety and 43.33% had very high anxiety.

Thus, this study explores the effectiveness of art therapy on anxiety, especially as there is paucity of research within an Indian context. Art therapy is being extensively studied and research is being conducted in various countries, but in India awareness about this therapy is still growing. As it a novel approach and has started to interest various clinical practitioners and researchers across India, the subject has started to get explored and researched upon.

The review of literature shows evidence of art therapy as an effective technique to reduce anxiety. This study focuses to use various techniques of art therapy within the therapeutic intervention to reduce the level of anxiety among individuals. Review of literature reveals that there is a paucity of studies indicating the effectiveness of art therapy on anxiety. The studies that exist use only few techniques to examine the effectiveness of it on anxiety, whereas this study examines the effectiveness of various art therapy techniques used in the intervention to reduce anxiety among individuals.

Methods

Study Design

The research design was a mixed method design consisting of quantitative and qualitative measures. The quantitative data was gathered through a self-report measure provided to the participants, in the beginning and after completion of all the intervention sessions. Thus the researcher used ‘before and after without control’ design to test the efficacy of art therapy on anxiety among adults. The qualitative interpretation of all sessions was done after the completion of each art intervention activity.

Sample

Purposive sampling method was used. 12 participants were screened for the study. 3 dropped out after the first session, due to travel inconvenience as they were out station residents and due to other personal reasons; 1 individual scored minimal anxiety, which is an exclusion criterion. The

remaining 8 participants were selected for the research whose scores on the selected scale belonged to the category of mild, moderate or severe anxiety. *The inclusion criteria for the sample include* (1) individuals with mild to severe level of anxiety on the selected scale; (2) individuals aged 18 to 38 years of age; (3) individuals of both genders and (4) willingness of the participant to undergo therapy intervention. *The exclusion criteria for the sample include:* (1) individuals with minimal level of anxiety on the selected scale; (2) individuals with any diagnosed psychiatric illness in the past and (3) individuals under any psychotropic medication

Data Collection

The procedure followed for the data collection of the study is (1) after deciding the topic of research and finalizing the variables, the sample population was selected; (2) private clinical psychological practitioners in the city and various counseling cells of colleges were contacted for data collection; (3) after receiving the permission, the purpose of the study, confidentiality of data and future implications of the study were explained to the authorities; (4) purposive sampling was used for the selection of the sample. Only those participants who met the criteria for the study, that is, the inclusion and exclusion criteria for the study was selected; (5) consent was taken from each participant to be participating in the study; confidentiality of information was discussed and permission was taken from the participant to use data for the purpose of research (6) the baseline assessment was done, to check the level of anxiety and the therapeutic intervention was discussed with the participant; (7) a module of eight sessions per individual was followed. Various techniques of art therapy have been employed to reduce the anxiety among the participating sample for the study; (8) the individual session for each participant was recorded; (9) after the completion of the therapeutic intervention, posttest was administered on the selected scale. The researcher is also the therapist who conducted the intervention sessions for this study, for all the participants. The researcher was a M.Phil. Clinical Psychology trainee, in a private university in India.

Intervention

Various techniques and art therapy activities have been used for this study, which may help to reduce the anxiety of individuals. The art therapy activities used for intervention in this study include exploration of emotions and self, draw a person in rain, family drawings, house tree person and art based mindfulness activities. The session for exploration of emotions and self allows the participant to allow and open up his unconscious thoughts and emotions, and break through the resistance of the participant. The session for draw a person in rain aims to explore the stress levels and the perceptions of the participants, both in the beginning and the end of the therapy session. The session for family drawings aimed to explore the interpersonal relationships of the participant, the positions he or she seeks for himself or herself. The session for house tree person aimed to explore the relationship of the participant with self and others. There were sessions for the art based mindfulness activities, which aimed to heal and sort solutions to the problems being faced by the participant. The duration for each session was approximately 60 minutes for all the participants, throughout the study.

Individual sessions were conducted for all participants by the same examiner. The pattern of conduction and the duration were constant across all sessions. The protocol allows to maintain uniform process of conduction of intervention. Thus, the same set of activities were used for all individuals.

Instruments

Beck Anxiety Inventory (Beck and Steer, 1993) was used to assess the level of anxiety among the participants. It is a 21-item self-report measure, to identify the symptoms of anxiety and quantifies the level of intensity. This scale is a four point likert scale, on which the individual has to rate each item based on the symptoms in the last one week; options range from 0 (not at all) to 3 (severely- 'I could barely stand it'). The score obtained may range between 0 - 63; scores 0-7 indicates minimal level of anxiety, 8-15 indicates mild level of anxiety; 16-25 indicates moderate level of anxiety and 26-63 indicates severe level of anxiety. It is a paper-and-pencil test which takes 5 to



10 minutes to complete. There is a high internal consistency with Cronbach's alphas ranging from 0.90 to 0.94 the test-retest coefficient is 0.62 (7-week interval) and 0.93 (1-week interval) (Julia, 2011). The scale has a good convergence validity with measures like Hamilton Anxiety Rating Scale ($r = 0.51$), State Trait Anxiety Inventory ($r = 0.47 - 0.58$) and the anxiety Symptom Checklist - 90 ($r = 0.81$) (Beck and Steer, 1991).

Data Analysis

The qualitative analysis was based upon the themes derived from the cases through the intervention. The researcher found and summarized the themes found in the sessions. These themes are based upon the reporting of the clients in the sessions. The quantitative analysis for pre-test and post-test intervention scores were compared graphically and the effective size of the intervention was evaluated using cohen's d (Lakens, 2013).

The formula used for this study is

$$\text{Cohen's } d_{rm} = \frac{M_{DIFF}}{\sqrt{sD_1^2 + sD_2^2 - 2XrX_1Xs_2}} X \sqrt{2(1-r)}$$

This particular formula of cohen'd was selected, as the researcher has used the value of paired t-test (in one or correlated sample).

Results

Qualitative Findings

Through the qualitative analysis various themes were found across the intervention. These include (a) gaining back spiritual strength; (b) individuals facing anxiety problems with a history of sexual abuse as a child; (c) anxiety due to general life difficulties; (d) mindfulness to clear the thought process.

Gaining Back Spiritual Strength

Three participants reported that they were facing difficulty dealing with their emotions thus also leading towards problems in various areas of life. As these individual were practicing their spiritual rituals until a few months back, but had discontinued for some or the other reason. Through the therapeutic process some problems were resolved. Latter in the session the clients reported to find back their spiritual path of life, this helped them in resolving various issues and made them feel more at peace. For all the three cases the anxiety level was reduced to minimal and mild level. They reported to find back purpose in life, which was in turmoil due to the evolving relations and roles in life. Inner peace and happiness was emphasized upon by these individuals.

Individuals Facing Anxiety Problems with a History of Sexual Abuse as a Child

The initial sessions of therapy reveal the emotional turmoil was being faced by two of the participants, due to which they had difficulty in adjusting and modulating his behavior and emotions across situations in life. While one participant revealed that he had faced sexual abuse various times as a child by various individuals, for which he was not emotionally supported by the family; another revealed that she was sexually abused once as a child, for which the family did not support her emotionally and also faced various other issues like disharmony between the parents. With the therapeutic process of art, they were able to cathartically release the emotional and cognitive complexities, while processing their relations with all individuals around them in a restructured manner. They were able to analyze and reanalyze their emotions around the various situations they faced. The process of art therapy supported them to strength emotionally without using words.

There are various traumatic memories that were brought up in the sessions. Trauma may take time to heal for individuals, thus, for these individuals' sessions were continued even after the completion sessions for the requirement of this study. The extra sessions were not a part of the study, but were only for the purpose of healing the trauma experienced by them.

Anxiety due to General Life Difficulties

Various other participants reported to face anxiety due to general life difficulties in their lives like breakup from a relationship, fights within the family, family pressure, living away from parents, etc. The results reveal that anxiety level of all participants had reduced. The individual's communication problems, stress, social concerns and communications were addressed and resolved through the therapeutic process. Perspective of the participants was able to change angles and look at the bigger picture rather than an over involved detail about a situation or emotion or thought being faced and processed. New meanings were denoted and possible reasons were pondered to gain the positivity to gain strength to overcome difficulties and forgive individuals around them. This was reported to gain strength in their interpersonal relationships.

Mindfulness to Clear the Thought Process

Two sessions of therapy included mindfulness through the art making using mandala and zentangle which helped reduce anxiety, while encouraging clear thought process. As reported by the participants they enjoyed the calmness experienced after the mindfulness exercises. It helped them cathartically put down their thoughts without using words. It was observed that some participants used more than one sheet for this activity. They reported an increase in the level of peacefulness with every increment in the sheet used. The level of chaos reduced at each level. The thought process gained clarity as the process cultivated de-cluttering process of thoughts, while gaining their personal logical explanations into their lives and situations.

Quantitative Analysis

Figure-1 shows the measure of pre-test and post-test scores of all the participants. In the preset study it was observed the pre-test scores out for the 8 participants, 2 had mild level of anxiety, 3 had moderate level of anxiety and 3 had severe level of anxiety. In the post-test scores out of the 8 participants, 3 participants had minimal level of anxiety, 3 had mild level of anxiety and two had moderate level of anxiety. Overall, there is a significant reduction in the level of anxiety of each

participant. There is a difference in the level of effect of intervention for each participant, for which various reasons may be accounted for like individual differences, resistance to change, complexity of problems being faced, presence or absence of supportive environment at home or within the peer group.

TABLE 1: Effect of Art Therapy on Anxiety

		N	Mean	Standard Deviation	T
Anxiety	Pre-test	8	26.87	11.41	5.446**
	Post-test	8	10.37	6.80	

** Significant at $p < 0.01$

The above table denotes the correlation between the level of anxiety in the pretest and posttests score, through t-test. As indicated the scores are significantly correlated at 0.01 (p value) levels.

In the present study the effect size using cohen's d is calculated as 1.57 for the present study. This indicates that there is a large size of effect of art therapy on anxiety among adults, as compared from the pre-test and post-test scores. Thus, the art therapy intervention has a vast impact on the individuals to help them reduce anxiety being faced due to various life situations.

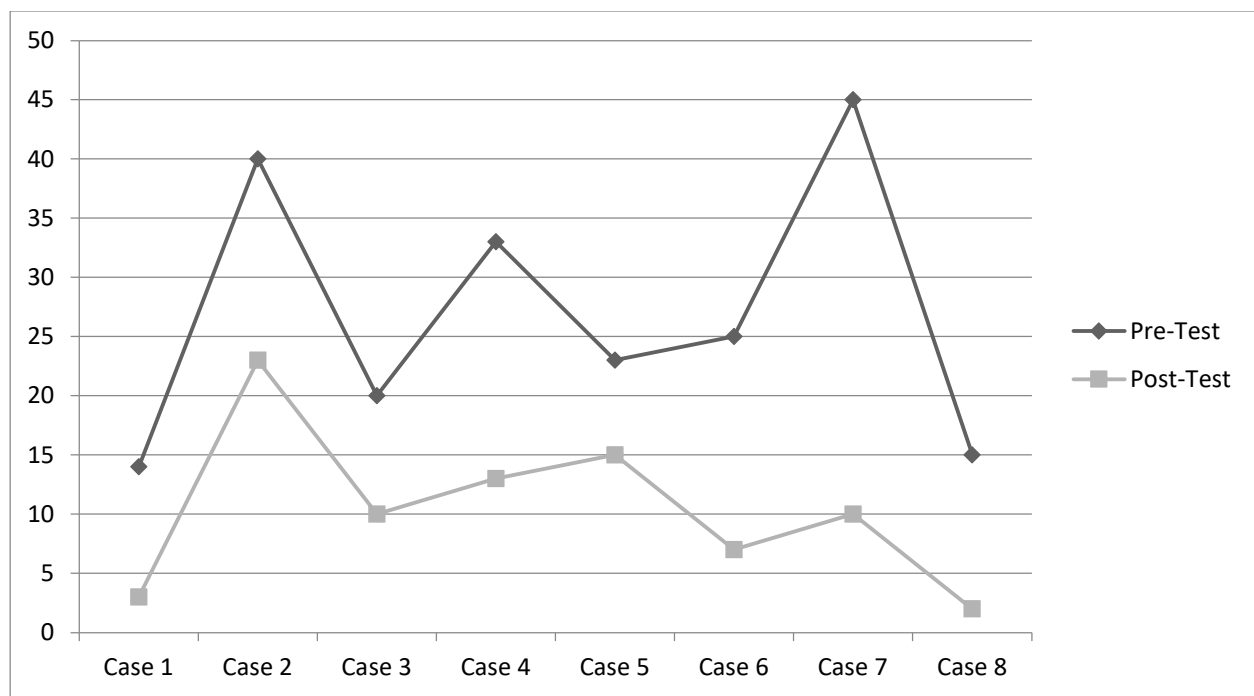


Figure 1

Discussion

Art Therapy is a relatively new and growing technique of therapy which is believed to be useful with children and individuals who embrace art and have a skill for it. While this therapy is an effective method to be used with children as demonstrated by various studies, across themes of trauma, autism, attention deficit hyperactivity disorder, etc., it is also effective with adults and geriatric. The creative process within the art therapy helps in enhancing wellbeing through the adulthood and old age (American Art Therapy Association, 1996). The present study was based upon mixed method design, that is, it includes both qualitative and quantitative analysis of the results obtained. The previous chapter of results, describe in detail each session wise outcome; the change of pre-test and post-test scores of anxiety of the participants; and the effect size of the overall impact of the art therapy intervention upon anxiety among adults.

The findings in the present study reveal the gaining back of spiritual strength of an individual. Similarly, is revealed in the literature (Farely-Hansen, 2001) that the process of art making inherits spiritual aspects and spirituality is essential to become a whole as an individual. This relationship between art, spirituality, and wholeness comes through in other writings on the proposed healing properties of art (Lively, 2011; Marek, 2001; McNiff; 2004). Furthermore, various studies reveal that individuals claim art as a healthy, good and productive method to connect and reconnect with spirituality. Similarly, it was observed in the present study that both the clients, as discussed above, explored their spiritual path and which helped them enhance ability to enrich themselves with spirituality and deal effectively with their problems.

The present study observes that individuals, who reported to have experienced sexual abuse during their childhood, faced various challenges and emotional turmoil resulting in anxiety. Research studies (Bowers, 1992) are evidence that during the time of intense stress and terror, the cognitive system is bypassed in all age groups. Through the medium of art therapy, visual and sensorimotor materials provide an opportunity to easily surface the repressed traumatic memories. As it was reported by these clients that such traumatic memories resurfaced within the sessions. Researches reveal that the process of art therapy allows an individual to overcome resistance, reduce tension, build trust and stimulate memory (White and Davis, 2010). The materials and mediums in art therapy may also stimulate self-exploration (White and Davis, 2010), which is an essential need for individuals who have experienced sexual abuse in life.

Sexual abuse experienced at any stage of life causes emotional turmoil within the individual. Often causing post-traumatic stress, the intensity many times leads an individual to lack of words to express their physical and psychological pain caused due to the event. Art therapy acts as a safe environment to reveal oneself without use of words; often through symbolic expression. Symbolic elaboration essentially represents the cognitive aspect of an individual through the developmental phase (Costa, 2002). Art activities within a therapeutic setting provide a safe and pleasant means

which encourages children to explore, make decisions, and solve problems through an inner dialogue, without necessarily using words. It also provides a way for them to portray their inner world without having to rely on words (Gil, 2006).

Anxiety due to general life difficulties like breakup from a relationship, family fights, family pressure, living away from parents, etc. is a theme that was observed in the present study. Various research studies support the efficacy of art therapy in a variety of rehabilitation settings including mental health problems, emotional and social problems, language and communication difficulties, stress etc (Jones, 2005). Another study (Van Lith et al, 2009) identified that the therapeutic process of art making plays a role in discovering oneself, produce passion and understand the meaning of life. It was also highlighted that making art making especially in a group setting enables the individual to develop of being as a part of the society or social world and deepen the interpersonal relationships.

Mindfulness is a state of mind which may be fostered with the help of mindfulness activities like making mandala and zentangle in a therapeutic setting. The present study reported to observe positive emotions and peacefulness being fostered within the individuals through this process. A study (Curry and Kasser, 2005) examined the effectiveness of drawing mandala in reducing anxiety. Anxiety level was assessed before and after getting involved in various forms of colouring. The result of the study revealed that anxiety level reduced after colouring mandala and plaid form. Another study (Slegelis, 1987) found that colouring and drawing within a circle experience more positive emotions as compared to drawing within a square.

There is a significant change in the level of anxiety post the art therapy intervention as observed in the present study. Literature supports such findings as revealed (Visnola et al, 2010) that there were significant changes in S-anxiety after art therapy, but no significant T-anxiety changes were observed in the groups. Mean changes of S-anxiety values are observed. Mean levels of S-anxiety decreased significantly between pre- and post-art therapy times ($P < 0.05$) for the study group but



not for the control group. The results of another study (Curry and Kasser, 2005) supported their hypothesis that colouring a mandala for 20 minutes is more effective at reducing anxiety than free-form colouring for 20 minutes. By measuring anxiety levels upon entering the study, after a brief anxiety induction and after 20 minutes of colouring, we were able to demonstrate that participants who coloured on a blank piece of paper showed no reductions in anxiety, whereas those participants who coloured a mandala actually decreased their anxiety levels to levels below that which they reported before the anxiety induction.

In the present study the effect size using Cohen's d is calculated as 1.57 for the present study. This indicates that there is a large size of effect of art therapy on anxiety among adults, as compared from the pre-test and post-test scores. Similar was revealed in a study (Cazamanski-Cohen et al, 2014) conducted that combines art based and cognitive behavioural interventions (CB-ART) to help thirteen women cope with pain, anxiety and depressive symptoms revealed an overall treatment change of 0.70, which indicates large size effect.

Limitations

The study has several limitations. Participants were not randomly assigned; rather purposive sampling as a method was used. Due to the small sample size, the results of the study cannot be generalized. Since a specific intervention module was used, due to individual differences the level of effectiveness may have been compromised. Some individuals required more number of sessions as compared to other individuals. The resistance of some participants is having affected the level of treatment. The subjective opinion of the participants to the research study may have affected their response to the intervention treatment. There may have been a biasness by the researcher, to focus more upon the favorable and contributing factors of the study, while overlooking points or factors that do not contribute favorably to the study. Especially in the case of qualitative analysis, the researcher could have found more sub-themes. Some responses given by the clients may be more socially accepted, while compromising some details provided. For future study the art

therapy intervention can be used with varied populations, large number of sample population. Control group can be included for the study. More number of therapy sessions may be conducted in the future study, for better effect of the intervention for all participants.

Clinical Implications and Recommendations for the Future

The study adds to the literature of art therapy, as the research in this area is developing in India. Art therapy is effective to reduce anxiety among adults. As art therapy is a relatively new medium of therapy being used in India, out of the studies found by the researcher (In the Indian context), most of the studies were done on children. Various techniques of art therapy have been used in the current study, which makes it different from most of the research studies. This study provides a base for future research into art therapy and its utility.

Conclusion

Anxiety is commonly experienced by all individuals at some point in life, which affects one's physical and psychological health. Art therapy helps in reducing the anxiety of the individual and fosters strength of an individual. The findings from the study reveal that art therapy is an effective method to reduce anxiety among adults. Art therapy as an intervention using various techniques provided the anxiety of an individual to reduce. The intervention of art therapy reduced anxiety for all participants.

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