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# Literature Review: the Relationship Between Art and Anxiety

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Literature Review: The Relationship Between Art and Anxiety

by

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and

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Anxiety can be defined as a feeling of “fear, dread, and uneasiness” (U.S. National Library of Medicine, 2020). It’s that feeling that accompanies stress that makes you feel restless, elevates your heart rate, and is absolutely normal to experience in everyday life. However, if you’re a part of the 30% of the population with an anxiety disorder, feelings of anxiety can be a struggle. Generalized anxiety disorder, panic disorder, phobias, and social anxiety disorders all contribute to elevated and unhealthy levels of anxiety in our lives, with each taking different tolls on us (Black, 2020; Mohammadi et al., 2020; Office on Women's Health, 2021; U.S. Department of Health and Human Services, 2022; U.S. National Library of Medicine, 2020; Wittchen, 2002). I’m sure almost every human on this earth has been anxious at some point to an unhealthy degree, if not a part of the large portion of the population that has been diagnosed with an anxiety disorder, and with the pandemic, rates of anxiety are increasing (Lakhan, Agrawal, & Sharma, 2020). I know I’ve felt way more anxious these past few years. With this in mind, having simple and effective ways for individuals to decrease their levels of anxiety is essential.

An incredibly easy and accessible way to ease the anxiety, that works in my own life, is to make art. To draw. To put pen or brush on paper. To bend and mold clay and be able to focus on the present. With all the anxiety and stress in our lives, anything we can find to help is crucial, especially if it’s as simple and universal as just making art whenever possible. The purpose of this research, of this literature review, is to further investigate the benefits of making art on anxiety disorders and gain a better understanding of the connection between art and mental health; specifically, its impacts on anxiety. By conducting a literature review on the current body of research and exploring connections between art and anxiety, I aim to address the question: **What is the relationship between making art and anxiety?** The goal of this research is to

compile the mountains of studies I have seen on this relationship, help inform others of ways art can help with anxiety, contribute to the greater body of research, and add to my own personal journey in coexisting with anxiety disorders and major depressive disorder.

## **Review of Literature**

### **1. The Effect of Making art on Anxiety**

#### **1.1 Making Art Reduces Anxiety**

The most consistent theme throughout the literature is findings pointing to a positive relationship between art and the reduction in anxiety. In creating art, there seems to be a positive impact, as is shown by a qualitative and quantitative study by De Morais et al. (2014). In this study, De Morais et al. (2014) sought to discover the effects of clay work on depression and anxiety in psychiatric patients. This was done by surveying 24 patients, half of whom were used as a control group, at the Maxwell Day Hospital of Londrina, Paraná, Brazil. The non-control group patients would take part in eight sessions of clay work (Figure 5) and would respond to questionnaires inquiring about depression and anxiety which could then be compared to the control group's responses. The authors found that the group working with clay had a reduction in anxiety and, along with that, an improvement in depression symptoms. This was a small study, but it shows how art can help in the reduction of anxiety and even seemed to help with depression.



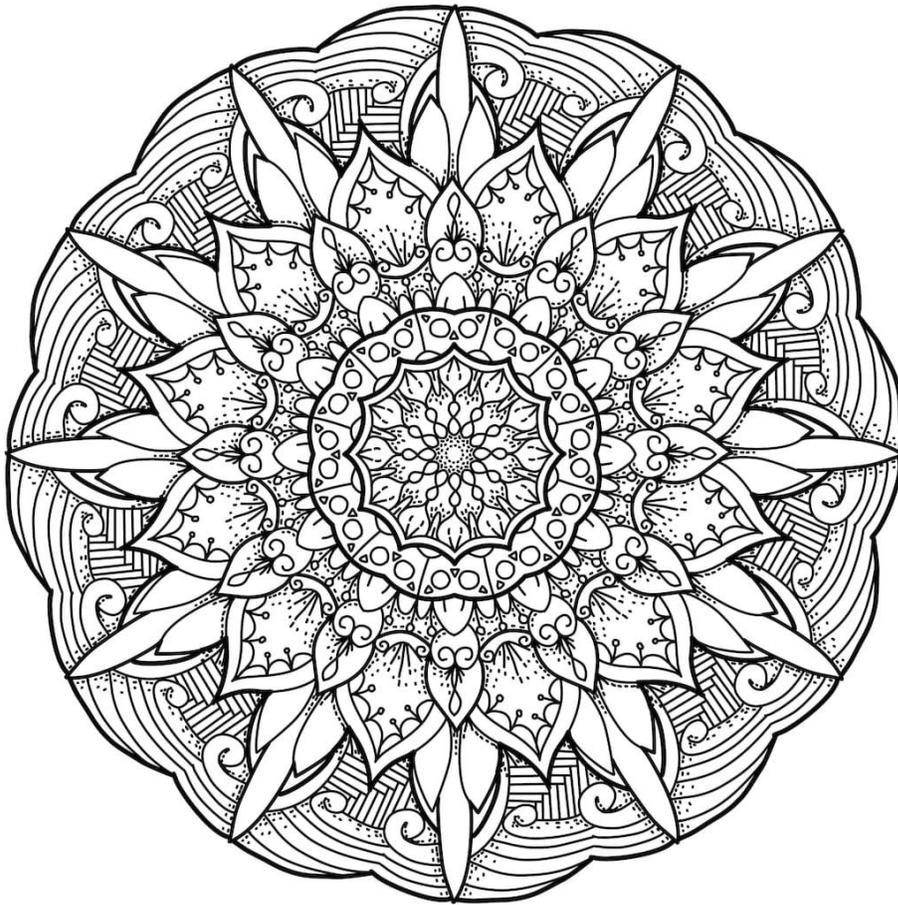
**Figure 5:** Images of the psychiatric patients working with clay in the study conducted by De Morais et al. (2014)

When making art, our stress and anxiety seem to decrease; specifically, as Kaimal, Ray, and Muniz (2016) found, it can decrease our levels of cortisol, a hormone that is indicative of stress. In their qualitative and quantitative study, Kaimal et al. (2016) looked into the effects of visual art-making on cortisol levels. This was done by having 39 healthy adults provide saliva samples before and after 45 minutes of art-making. The participants also provided written responses to the experience. The authors found a statistically significant lowering of cortisol levels and written responses showed that the patients found the art-making to be “relaxing, enjoyable, helpful for learning about new aspects of self, freeing from constraints, an evolving

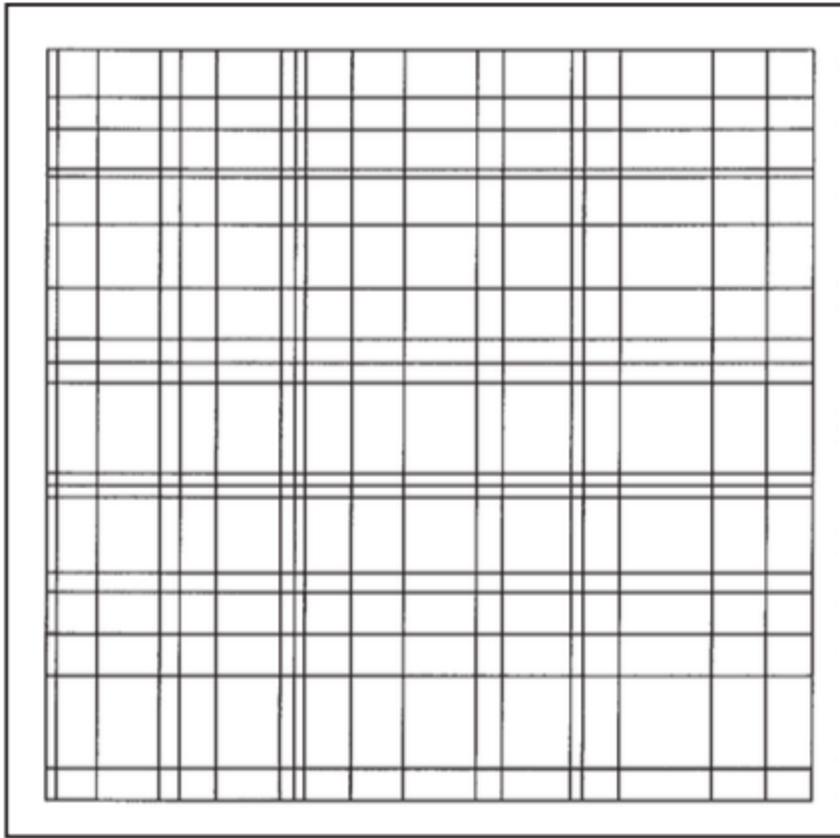
process of initial struggle to later resolution, and about flow/losing themselves in the work” (Kaimal et al., 2016). These are just two of the several studies I found on the relationship between art and anxiety that all noted a statistically significant reduction in anxiety after partaking in several different forms of art (Abbing, Baars, De Sonnevile, Ponstein, & Swaab, 2019; Ashlock, Miller-Perrin, & Krumrei-Mancuso, 2018; Bosman, et al. 2021; Collins, 1970; Curry, & Kasser, 2005; Elimimian et al., 2020; Kapitan, 2013; Lee, 2018; Lyshak-Stelzer, Singer, Patricia, & Chemtob, 2007; Malboeuf-Hurtubise, et al., 2021; Resmy, & Raj Kumar, 2020; Sao, & Maurya, 2021; Sandmire, Gorham, Rankin, & Grimm, 2012; Sumner, Crone, Hughes, & James, 2021).

## **1.2 Making Art Induces a Meditative or Flow State**

Specifically, making art helps with anxiety because it seems to induce a relaxing meditative state or flow state for us. When I draw, I find myself focusing on the brush and the paper --on the present; I find myself letting the sorrows of the day go and just...being. It certainly feels like what I would describe as a meditative or flow state, and I certainly feel better after, so it was interesting to see this was a commonality. One qualitative study by Curry and Kasser (2005) investigated the effectiveness of a few different art activities to both reduce anxiety and possibly attain this soothing, meditative, or flow state. For this study, 84 undergraduate students were asked to go through brief anxiety-inducing events and then randomly assigned to color mandalas (Figure 1), plaid designs (Figure 2), or the participants were asked to color-free form.



**Figure 1:** A mandala design similar to the one used in the study conducted by Curry and Kasser (2005) (*Our Mandalas*, n.d.).



**Figure 2:** The plaid design used in the study conducted by Curry and Kasser (2005) (Stephanie, 2015).

The student's levels of anxiety were measured when they entered the lab, before the anxiety-inducing experience, and after 20 minutes of coloring. The study showed a statistically significant decrease in anxiety after the more structured coloring of mandalas and plaid designs, to levels even below the initial measuring of anxiety once entering the lab, and the drawing also seemed to help the students enter a meditative-like state. This study, like many others I came across, did not actively test if there is, in fact, a flow state in making art. Instead, the authors suggested the reason making art benefits us is—because it seems, based on subject reports, to induce such a state (Curry & Kasser, 2005).

In another qualitative study, Sandmire, Gorham, Rankin, and Grimm (2012) sought to understand the psychological effects of art-making. They did this by having 57 undergraduate students either make art or serve as a control group one week before finals with their anxiety being tested before and after participation. The art in this study included several different mediums, like making collages, coloring in mandalas, or free-form painting. The authors found a statistically significant decrease in anxiety after making art and noted that art and art therapy programs would be beneficial for stress. The authors mentioned that art-making may reduce anxiety “through a temporary, relaxing escape from reality” (Sandmire et al., 2012). When I make art, it definitely feels like it offers me an escape from reality and lets me sit in the world of the canvas while I draw or paint. This relaxing escape seems to provide us with a flow-like or meditative state when we make art. The authors also noted that, specifically, the “tactile and visual experience, as well as the repetitive muscular activity inherent in art-making” (Sandmire et al., 2012), seem to be what helps most in providing a flow state. If making art induces a flow state, this provides an explanation as to why it seems so effective in decreasing anxiety. Meditation or getting yourself to relax, to breathe, are all effective ways to help with anxiety (Black, 2020; Office on Women's Health, 2021; U.S. Department of Health and Human Services, 2022). If art helps us enter flow states where meditation and relaxing come easily, then it makes sense why making art leads to a reduction in anxiety.

## **2. Long Term Impacts of Making Art**

### **2.1 Emotional Regulation**

Making art or art therapy can help us reduce anxiety in our lives. But does it stick? Another theme that cropped up fairly consistently was the long-term impact of making art, whether with emotional regulation or simply increasing people's quality of life. Emotional regulation is defined as how well someone can consciously manage emotions and change the target of emotions, and subsequent behavior, to have better outcomes, and how well someone can subconsciously modulate their emotions' intensity and /or duration (American Psychological Association, n.d.).

Several studies showed these long-term impacts on emotional regulation including a qualitative study by Jang and Choi (2012). This study was conducted to see how group art therapy with clay (Figures 3 and 4) would affect the ego-resilience in 16 adolescents with low Social Economic Status (SES). Ego-resilience is a "personal trait that helps with mental and emotional adaptation in a changing and conflicting environment" (Jang & Choi, 2012), a measure of emotional regulation. In this study, Jang and Choi (2012) found that when students took part in 18 group therapy sessions they experienced a statistically significant positive effect on their ego-resilience. By working with art in therapy sessions, the kids were able to gain better mental and emotional adaptation, which had a positive impact on their ability to regulate their emotions.



**Figure 3:** Three kids working with clay in the group therapy art sessions conducted by Jang and Choi (2012).



**Figure 4:** Kids working with clay in the group therapy art sessions conducted by Jang and Choi (2012).

Another study by Abbing et al. (2019) addressed how art could impact our emotional regulation. In this qualitative and quantitative study, the authors sought to understand the effects of art therapy as an option for treating anxiety in adult women. To do this, they had 47 women diagnosed with different anxiety disorders take part in 10-12 art therapy sessions (Table 1).

Before taking part in art therapy, afterward, and three months after art therapy, the participants were given four different questionnaires to assess their psychopathology, levels of anxiety, quality of life, and emotional regulation. The authors found that taking part in art therapy significantly reduced the participants' anxiety symptoms, increased their quality of life, and led to positive changes in their emotional regulation. The authors also noted that the "positive changes in [emotional regulation], especially in the acceptance of emotions and in improved goal-oriented action, account for 46% of the reduction of anxiety symptom severity" (Abbing et al., 2019). Not only did art therapy help with emotional regulation, but that ability to regulate emotions seemed to greatly contribute to the reduction in anxiety. Creating art seemed to give the participants a "feeling of being 'in control'" (Abbing et al., 2019), of being able to regulate their emotions, and this feeling of control "helps to counterbalance the overwhelming experience of anxiety" (Abbing et al., 2019). Creating art helps to greatly ease the symptoms of anxiety disorders by giving the participants a sense of control over their emotions.

Session	Aims	Exercises
Session 1–3	Intake Set treatment goals and plan	Free art work
Sessions 4–10	Optional treatment goals: <i>Creating a feeling of safety</i> <i>Experiencing boundaries</i> <i>Strengthening objectivity</i> <i>Reinforcing connection with feeling</i> <i>Promoting relaxation</i> <i>Reinforcing self-confidence</i> Other treatment goals are allowed; mention these treatment goals here and describe why these are important in the treatment of your client.	Optional artistic exercises: • Clay: <i>Clay modeling of a sphere.</i> <i>Clay modeling of platonic solids.</i> <i>Transformation of (symbolic) shapes.</i> • Drawing: <i>Expression of fear in free drawing.</i> <i>Atmospheric images in relation to inner feeling, with pastel drawing.</i> <i>Shape drawing (loops).</i> <i>Drawing from observation.</i> <i>Light-dark exercises with charcoal.</i> <i>Color exercises with pastel.</i> • Painting: <i>Expression of fear in free painting.</i> <i>Color exercises in wet-on-wet technique (aquarelle paint on wet paper).</i> Other exercises are allowed; provide rationale for these exercises and a description.
Session 12	Evaluation	

**Table 1:** List of aims and art exercises in the therapy sessions conducted by Abbing et al. (2019).

## 2.2 Increases in Quality of Life

Besides helping with emotional regulation, another long-term impact of making art seemed to be an increase in quality of life. In the study conducted by Abbing et al. (2019), they found an increase in quality of life after making art, and this improved quality of life stuck at least three months after taking part in the art therapy. A study by Bosman et al. (2021) also found a relationship between making art and an increase in quality of life. In this literature review on quantitative studies, the authors aimed to look into the ability to create art to impact the

psychological problems (mainly anxiety and depression) in cancer patients and improve their quality of life. The authors looked through several databases for articles that, specifically, addressed the impact of creating art among adults and then whittled them down to a few articles they could further analyze that met specific criteria. The authors found from the articles and studies analyzed that art therapy with an artist or therapist could help decrease symptoms of anxiety and depression and improve the cancer patients' quality of life. Creating art seemed to impact the quality of life of participants, and it would stick for a time after making the art.

### **3. Making Art and Other Psychological Conditions**

#### **3.1 Multimorbidity with Anxiety Disorders**

Multimorbidity, the co-occurrence of multiple disorders, is common among people with anxiety disorders. As many as 90% of people with social anxiety disorder have a comorbid disorder, a second disorder in addition to the anxiety (Koyuncu, İnce, Ertekin, & Tükel, 2019). Those with generalized anxiety disorder have rates of comorbidity that “equal or exceed those of other anxiety disorders, and it is one of the most common comorbid conditions with other disorders” (Noyes, n.d.). With major depressive disorder and other anxiety disorders being the most common. Comorbidity can mean increased symptom severity, worse outcomes, seeking treatment more often, and treatments not being as effective (Noyes, n.d.; Koyuncu et al., 2019). Multimorbidity is common for those with anxiety disorders, and it makes treatment harder and symptoms much worse. In my own life, I have found this to be true, as a treatment for one disorder may not affect another. Likewise, I have found my depression to be exacerbated during bouts of anxiety and vice versa. A consistent theme among studies looking into the effectiveness

of making art on reducing anxiety was seeing how it affects those with multimorbidity, in seeing if and how making art can help.

One such study that focused on multimorbidity is a quantitative study by Sumner et al. (2021). In this study, the authors looked into how prescribed art interventions affected people with anxiety and depression. The study assessed changes in anxiety, depression, and overall well-being in 245 participants (110 of whom had identified multimorbidity). The participants were evaluated before and after the prescribed art interventions at both the initial art referral and at re-referral. The authors found that symptoms of anxiety and depression and well-being were significantly improved overall. Making art seemed to vastly improve symptoms for those who had the multimorbid disorders of anxiety and depression.

Making art improving the symptoms of multimorbidity was also found to be true in the studies conducted by Bosman et al. (2021) and De Morais et al. (2014) which were mentioned previously. Bosman et al. (2021) noted that, for cancer patients, making art helped with symptoms of depression along with helping anxiety symptoms. De Morais et al. (2014) had similar reductions in symptoms of depression, along with anxiety, among the psychiatric patients they had working with clay (Figure 5). Making art helps with not just anxiety disorders but also helps alleviate symptoms of depression. In my own life, I have found that after making art, the symptoms of my depression and anxiety disorders ease. Art has always helped me focus and center myself in the present and has helped vastly in alleviating the cloud of depression. Making art is a simple and effective way to help improve symptoms of multiple disorders.

### **3.2 Psychological Conditions Other Than Anxiety**

When reviewing the literature on the effects of making art on anxiety, I also came across a large number of studies looking into how making art can affect disorders other than anxiety. For example, in a qualitative study, Haeyen, van Hooren, & Hutschemaekers (2015) hoped to illuminate how art therapy affects those with cluster B/C personality disorders. To do this, interviews were conducted with 29 participants all having varying disorders. There were several participants with unspecified personality disorders and others were diagnosed with “evasive, borderline, dependent, obsessive-compulsive and narcissistic personality disorders and/or traits” (Haeyen et al., 2015). Every participant had received art therapy (Figures 6, 7, 8, and 9). The authors found that art therapy, relative to verbal therapy, seemed to be a “more direct way to access emotions” (Haeyen et al., 2015) and it seemed to “offer a specific pathway to more emotional awareness and constructive emotion regulation” (Haeyen et al., 2015). Specifically, participants experienced “improved sensory perception, more personal integration, emotion regulation, insight and behavior change” (Haeyen et al., 2015). By taking part in art therapy, those with personality disorders found making art to be a medium to help both access and regulate their emotions and found that it positively affected their personality disorder symptoms (Figures 6, 7, 8, and 9). The improvement making art has on regulating emotions doesn’t just help with anxiety disorders. Making art seems to positively affect those with other disorders related to emotional regulation.



Image 1: 'I am scared stiff every time I see what I draw. I do tend to play down things ... I look at it and I often get a bit of shock, because how trapped or how unsafe I felt comes to the surface.... Really intense emotions are revealed. ... Through becoming conscious, feelings can be integrated.'  
(Respondent 27, a 21-year-old female)

**Figure 6:** Image of art made by a participant in the study conducted by Haeyen et al. (2015)

along with a quote from their interview.



Image 2: '... the two emotions are integrated in such a way that they exist beside each other and that they can become unified ... by working with contrast and material such as chicken wire and sheep wool, symbolising contrasting emotions ... together in one work of art. ... Both are possible; at the same time, it was such an eye-opener for me ... as if things have come together. Before, I was such a mess; my feelings were rushing through each other. ... I got more of a grip on myself.' (Respondent 2, a 44-year-old female)

**Figure 7:** Image of art made by a participant in the study conducted by Haeyen et al. (2015) along with a quote from their interview.



Image 3: 'And I'm thinking, "oh well, I will see what comes", and I was splashing around with some ink, and the red was like blood for me, and everything was boiling inside, I just got really cross, I felt really anxious and I had to distance myself, it was so important to me, because I usually push away the anger inside of me ...; it became clear to me how angry I actually am, that is something I really had to face here. ... My husband said: "You will get through the rest, but this had to be brought up". For me, it was a real turning point. I also realised that by being in contact with the group about this, a lot of emotion could break loose. ... at that moment I realised that I do have control of it.' (Respondent 9, a 54-year-old female)

**Figure 8:** Image of art made by a participant in the study conducted by Haeyen et al. (2015) along with a quote from their interview.



Image 4: 'AT has really helped me to work on things or to get things going. This project was actually a starting point of me facing a lot deeper problem that I had been avoiding in verbal therapy until then ... about the (um...) sexual abuse in my past. ... I made photos of symbols that stand for me and for a part of my life. ... I put them in cigar boxes, they each represent a certain moment in my life ... and I wrote a poem to go with each part.' (Respondent 18, a 27-year-old female)

**Figure 9:** Image of art made by a participant in the study conducted by Haeyen et al. (2015) along with a quote from their interview.

Another qualitative study I reviewed conducted by Sagan (2018), inquired as to how art can improve the negative symptoms of dissociative identity disorder (DID). To do this, the author conducted a case study on a subject known as Henri through several long interviews. DID is a complex disorder associated with severe childhood relational trauma with a range of symptoms. Some of the most notable symptoms are dissociation, memory loss, and the presence of more than one sense of identity, or “alters,” all living in one body, in one system. DID is also characterized by a hesitance to take part in long-term therapy. In interviewing Henri, Sagan learned how making art helped Henri in learning more about her alters, including their experiences, their memories, and their individual personalities. Making art gave an indication of

the alters present, gave a voice to the alters who didn't talk, helped reveal missing memories and scenes of trauma, and helped Henri in integrating everyone into their system by offering a safe place to communicate.

Speaking to others about severe trauma can be difficult. This is especially true if you have been silenced in your childhood, which is common with DID. Visual art can help by offering a means to “look at a trauma without being it” (Sagan 2018), to look at what happened in a way that is often difficult to find with verbal therapy. This is especially essential when you consider traumatic experiences that are nonverbal or preverbal. By making art, Henri found themselves integrating and communicating in a way that was difficult to achieve with other methods (Sagan 2018). This idea of art helping with integration also echoes the idea that making art helps with disorders related to emotional regulation. Henri was able to manage their emotions consciously and subconsciously much better after drawing and having their alters draw. Henri's ability to regulate their emotions, to have better outcomes, and to modulate the intensity of their emotions was greatly aided by making art.

## **Conclusion**

Making art helps alleviate the symptoms of anxiety disorders, helps us enter a beneficial meditative or flow state, improves our ability to emotionally regulate, and adds to our quality of life. All of the studies and articles reviewed agree that there is a positive relationship between making art and anxiety and mention how the benefits of making art extend beyond just anxiety. Making art can help with multimorbidity and with other psychological conditions besides anxiety disorders. My own experiences match these findings. I have always felt at ease while making art

and it seemed to reduce the symptoms of my anxiety disorder and major depressive disorder.

Now I know for sure that making art is beneficial and I will seek out more opportunities in my life to draw or sculpt or paint or whatever else may come to mind.

Although there is already a lot of research into the benefits of making art, more research still needs to be done. Longitudinal studies, studies looking into any negative effects of making art, if self-administered art therapy is as effective as clinical settings, how making art compares to other forms of therapy, and the differences between different socio-demographics when making art are all gaps in the current body of research. I was not able to find much on these topics and, in the future, these should be studied to further test and verify how making art can help anxiety and other disorders. However, from the body of knowledge, we do have, making art can be utilized as a tool in our own lives and also as therapeutic treatment. Making art is cost-effective as all you need to start is paper and coloring materials. It is also now known that avenues other than therapy and medicinal treatment can be used to help with psychological conditions. I imagine there are other beneficial practices that can be implemented to help with psychological conditions that have not been studied or require more research. Making art has been incredibly beneficial in my own life and I hope more people take it up in their own lives and experience the benefits it has to offer.

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