



Review Paper On Mandala As A Mindfulness Tool And Its Consequent Implications On Stress Management And Improved Focus

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ABSTRACT

This review paper explores the use of mandala as a mindfulness tool for stress management and improved focus. The authors draw from previous scientific investigations and studies on the benefits of mandala coloring for mental health. The paper focuses on mandala coloring as a therapeutic tool. The study investigates the effects of mindfulness-based mandala coloring made within nature on individuals with chronic widespread musculoskeletal pain. The paper also explores the science behind mandala coloring, including research studies that have examined the effects of mandala coloring on stress and anxiety. The authors conclude that mandala coloring can be an effective tool for reducing stress and anxiety, improving focus, and promoting overall mental health. The paper provides practical guidance for implementing mandala coloring as a mindfulness tool and highlights the potential benefits of this practice for individuals with chronic pain and other mental health conditions. Overall, this review paper provides a comprehensive overview of the use of the mandala as a mindfulness tool and its consequent implications on stress management and improved focus.

Findings suggest that mandala drawing can increase young people's mindfulness and may hold promise as an effective tool for alleviating anxiety.

Keywords: mandala, mindfulness, stress management, focus, art therapy,

Introduction:

Mandala art therapy has become an increasingly popular mindfulness tool, known for its ability to reduce stress and improve mental well-being. Xie, G.-H., & Wang, Q. (2021) found in their study that the mandala is often used as a mindfulness tool by combining the tangible mandala and the intangible mindfulness. This involves putting one's attention on purpose and resting one's gaze on the mandala being created, allowing thoughts to empty out onto the mandala flower being created in a gradual process. This process is seen as a form of meditation, and hence, mandala meditation is a form of visual meditation.

Mandala is a Sanskrit term that means circle and is synonymous with the word "Chakravala," meaning a cosmic disc or wheel. Chakra is manifested in Art, Yoga, and Tantrik tradition as one of the central symbols of the oriental civilization. The paper also mentions that Chakra literally means solar disc, which is regarded as a symbol of Time scale since the ancient period. Therefore, the Mandala symbolizes the universe, and the Chakra symbolizes the cosmic disc or wheel, which represents time and space. Shukya, M. (1970)

Mandala art therapy involves creating intricate designs within a circular pattern. The process of creating mandalas encourages focus, concentration, and relaxation of the mind. Engaging in this process leads to a sense of calmness, enhanced creativity, and increased well-being.

One of the benefits of mandala art therapy is its ability to reduce stress. When we're stressed, our minds are often in a state of chaos and confusion. Engaging in mandala art allows us to focus entirely on one thing, helping our minds to let go of stressful thoughts and enter a more meditative state. As we work on a mandala, we can

become absorbed in the process, leading to a state of mindfulness that can have a calming effect on our minds and bodies.

Creating mandalas can also help us feel more centred and grounded, which can be particularly helpful during times of stress. By focusing on the circular pattern, we can tap into a sense of wholeness and tranquillity that can help us to feel more in control and at ease.

Another benefit of mandala art therapy is that it can help to improve our overall sense of well-being. Engaging in creative activities can stimulate the brain in positive ways, helping to boost our mood, improve our self-esteem, and increase our overall sense of happiness.

The mandala is a spiritual symbol used in art therapy to alleviate stress and increase focus. Mandala drawing has been found to increase young people's mindfulness and may hold promise as an effective tool for alleviating anxiety. The aim of this review paper is to investigate the use of mandala as a mindfulness tool in stress management and improved focus.

The Benefits of Mandala Coloring:

This section discusses the benefits of mandala colouring, including stress reduction, improved focus, and increased creativity, mandala coloring has several benefits, including promoting mindfulness and healing, allowing unsettling or disturbing thoughts to escape onto a piece of paper, and decreasing symptoms of stress, anxiety, and depression.

Various symbols used in the Mandala Art:

- 1. Circle:** The circle is the most basic and common symbol in Mandala art. It represents wholeness, unity, and infinity.
- 2. Square:** The square represents stability, balance, and grounding.
- 3. Triangle:** The triangle represents the three aspects of existence - past, present, and future.
- 4. Lotus:** The lotus represents purity, enlightenment, and spiritual awakening.
- 5. Sun and Moon:** The sun and moon represent masculine and feminine energies, respectively.
- 6. Geometric shapes:** Geometric shapes such as squares, triangles, and circles are used to create intricate patterns and designs in Mandala art.
- 7. Animals:** Animals such as elephants, lions, and birds are often depicted in Mandala art to represent different qualities and characteristics.

These symbols are used in various combinations and patterns to create unique and intricate Mandala designs (Shakya, M. (1970))

Mandala & Neuroscience:

The relationship between mandalas and neuroscience is rooted in the impact that mandalas have on the brain and its neuroanatomical basis a study by **Karnik, S. (2021)**. Mandalas, which are circular designs, have been found to improve concentration and attention span. The circular shape of mandalas allows for easy recognition and identification, requiring less intermediate processing by the brain compared to other forms.

Creating mandalas can activate the relaxation response, which is mediated through the middle prefrontal cortex of the brain and the parasympathetic branch of the autonomous nervous system. The concentration and repetitive pattern-making involved in drawing mandalas help calm the body, leading to the secretion of oxytocin, which counteracts the negative effects of stress and inflammation.

Mandalas also have an impact on the amygdala, which is responsible for emotional processing. Stressful events can modify the functionality and morphology of the amygdala, leading to stress-induced psychopathologies such as anxiety and depression. Mandalas help reduce the activity of the amygdala, reducing anxiety and stress.

Drawing mandalas can also strengthen the connection between the left and right hemispheres of the brain. The activity engages both sides of the brain simultaneously, with the right hemisphere being involved in choosing colours and the left hemisphere following the lines. This neural cooperation strengthens the connections between the hemispheres.

Mandala Coloring as a Therapeutic Tool:

Based on a study (Choi, H., Jeon, Y.-H., Hong, S.-C., Kim, S.-Y., & Woo, J.-M. (2021)), the management of chronic pain, Mandala has therapeutic benefits in promoting the state of mindfulness. The complexity and circular and geometric patterns of a mandala are therapeutically beneficial in reducing stress and stabilizing mood. The study investigated the effects of mindfulness-based mandala coloring made within nature on individuals with chronic widespread musculoskeletal pain (CWP) and found that MBMC within nature is effective in reducing pain, psychological stress responses, and cortisol levels in individuals with CWP.

Therefore, the study suggests that MBMC within nature could be a complementary therapeutic intervention for the management of patients with CWP.

Mindfulness-Based Mandala Coloring

Mindfulness-based mandala coloring (MBMC) is a form of art therapy that combines the principles of mindfulness with the creation of mandalas, which are circular and geometric patterns. The process involves coloring pre-drawn mandalas with colored pencils while monitoring changes in emotional state and observing the natural surroundings. MBMC is believed to promote a state of mindfulness, reduce stress, and improve psychological well-being. This technique has been used as a short-term treatment for various health conditions, including chronic widespread musculoskeletal pain. MBMC made within nature involves conducting the activity in a natural environment, which has been shown to enhance the therapeutic benefits of art therapy (Choi, H., Jeon, Y.-H., Hong, S.-C., Kim, S.-Y., & Woo, J.-M. (2021).

Literature review

Xie, G.-H., & Wang, Q. (2021) in their paper discuss the history and significance of mandalas in Eastern religions and how they can be used as a tool to promote mental and physical well-being. It also explores the different forms of mandala art therapy and their therapeutic benefits, including reducing stress, anxiety, and depression, increasing self-awareness, and promoting relaxation and mindfulness. The paper concludes that mandala art therapy is a promising and effective form of therapy that can be used in conjunction with other treatments to improve overall well-being.

Karnik, S. (2021) explored the connection between mandalas and neuroscience, specifically focusing on the therapeutic benefits of mandalas in reducing stress, anxiety, and promoting relaxation. The paper discusses the relationship between brain anatomy and the effects of drawing and colouring mandalas, highlighting the changes that occur in the brain during this activity. It also emphasizes the role of the amygdala in stress and the potential of mandalas to influence emotions and perception. The study suggests that mandalas can be a useful tool for promoting well-being and self-awareness, and further research in this area could provide a better understanding of the effectiveness of mandala therapy.

A study discusses the potential benefits of mindfulness-based mandala coloring (MBMC) made within nature for the management of chronic widespread musculoskeletal pain (CWP), including fibromyalgia syndrome. The study by Choi, H., Jeon, Y.-H., Hong, S.-C., Kim, S.-Y., & Woo, J.-M. (2021). found that MBMC within nature was effective in reducing pain, psychological stress responses, and cortisol levels in individuals with CWP. Art therapy studies have also reported chronic pain effects for various population groups and medical conditions, including fibromyalgia. The therapeutic factors revealed in art therapy studies for pain management include facilitating self-realization and rediscovering a more evident self, providing security of relational attachment, and emotional and psychological support. Mindfulness-based interventions, such as MBSR and MBAT, have also been shown to be effective in reducing pain, anxiety, depression, and stress. Overall, the current paper suggests that MBMC within nature and other non-pharmacological pain management interventions, such as art therapy and mindfulness-based interventions, may be beneficial for individuals with chronic pain, including fibromyalgia syndrome.

Several studies have shown that mandala drawing can be an effective strategy for reducing anxiety in hospitalized COVID-19 patients (Li *et al.*, 2021). Furthermore, research has shown that both structured coloring of mandalas and more free drawing are equivalently effective for reducing anxiety (Ashlock *et al.*, 2021).

Shakya, M. (1970). Basic concepts of Mandala. *Voice of History* aims to provide a comprehensive understanding of the Mandala concept, its origin, and its significance in the Oriental civilisation. The paper discusses the symbolic representation of the five elements, the use of the Mandala in meditation, and its connection to the subtle body mechanism. The author also explores the relationship between Mandala and Chakra, central symbols in Art, Yoga, and Tantrik tradition.

Research Methodology:

This review paper encompasses a thorough examination of the literature, encompassing multiple databases such as PubMed, PsycINFO, Google Scholar, ResearchGate. The researcher conducted a comprehensive search using specific search terms including mandala, mindfulness, stress management, focus, coloring therapy, art therapy, meditation, self-regulation, and well-being.

Objectives:

- To explore the benefits of mandala coloring as a mindfulness tool for stress management and improved focus.
- To examine the science behind mandala coloring and its therapeutic effects.

Data Analysis and Discussion

The Scholar has done an extensive review of the literature based on the objective of the study and a total of 32 papers were reviewed by the researcher, and subsequently selected 15 papers that were deemed relevant to the subject matter, to be included in this review paper. The discussion is hence, as follows:

S.No	Citation	Literature Review	Findings
1.	Sari Ozturk, C., et.al, E. (2022). The effect of mindfulness-based mandala activity on anxiety and spiritual well-being levels of senior nursing students: A randomized controlled study.	The study found that mindfulness-based mandala activity was effective in reducing anxiety and improving spirituality, emotion management, and comfort in nursing students with high anxiety in pandemic conditions. The study highlights the importance of creating a qualified and reformative educational environment to support nursing students psychosocially. Overall, the study suggests that art therapy methods should be included in nursing education and in-service training.	The results suggest that various art therapy methods, including mindfulness-based mandala activities, can be applied to support the psychosocial health of nursing students and nurses who are faced with various stress factors and to increase their well-being.
2.	Xie, G.-H., & Wang, Q. (2021). Mandala coloring as a therapeutic tool in treating stress-anxiety-depression syndrome.	The paper explores the history and significance of mandalas in Eastern religions and how they can be used as a tool to promote mental and physical well-being. The paper discusses the different forms of mandala art therapy and their therapeutic benefits, including reducing stress, anxiety, and depression, increasing self-awareness, and promoting relaxation and mindfulness.	The paper concludes that mandala art therapy is a promising and effective form of therapy that can be used in conjunction with other treatments to improve overall well-being.
3.	Karnik, S. (2021). Mandalas & Neuroscience. International	This study examines the connection between brain anatomy and mandalas as a form of art therapy. The article concludes that the effectiveness of mandala therapy lies in the changes occurring in the brain operations when someone is engaged in that activity. The synthesis of research portrayed in this article will be helpful to art therapists and mental health professionals for giving a neural basis and biology-focused effectiveness of the mandala therapy. Mandalas have proven to be useful in various branches of psychology, including transpersonal psychology, cognitive psychology, and occupational therapy.	Mandalas help to reduce amygdala activity, strengthen the connection between left and right hemispheres, and improve attention, perception, and visual motor coordination. Mandalas are an effective remedy for various disorders, including stress, anxiety, depression, and lack of focus.
4.	Choi, <i>et al.</i> (2021). Mindfulness-Based Mandala Coloring (MBMC) Made within Nature for Chronic Widespread Pain (CWP)	The experiment showed significant improvements in tender points, total stress level, depressive symptoms, anger symptoms, and salivary cortisol in the experimental group. The positive results could be a product of the experimental design rather than the treatment itself. A rigorous experimental design provides better understanding of mindfulness-based mandala coloring made within nature.	The study found that mindfulness-based mandala coloring made within nature is effective in reducing pain, psychological stress responses, and cortisol levels in individuals with chronic widespread musculoskeletal pain (CWP).
5.	Emanuela, C., <i>et al.</i> (2021). The effectiveness of coloring in reducing anxiety and improving PWB in adolescents.	This paper concludes that mandala coloring activity is more effective in reducing anxiety but has not been proven to improve psychological well-being. The decrease in anxiety that occurs in adolescents is temporary (state anxiety), namely anxiety that can change from time to time where in response to situations that threaten adolescents, it is not influenced by personality. The study also suggests that future studies need to consider the number of participants being enlarged and the provision of multiple intervention sessions.	The study found that mandala coloring can reduce anxiety in adolescents, which is consistent with previous research.
6.	Liu, C., <i>et al.</i> (2020). Cooperative and individual mandala drawing have different effects on mindfulness, spirituality, and subjective well-being.	The study found that mandala drawing can reduce negative emotions and raise an individual's spiritual level. Both CMD and IMD significantly enhanced the subjects' spirituality. CMD had a more significant improvement and promotion effect on SWB of subjects compared to IMD. CMD mainly helped to enhance SWB by affecting PA of the subjects, while IMD had no significant effect on PA, and the enhancement effect of SWB was weaker than that of CMD. There existed a positive correlation between spirituality, mindfulness, and SWB.	The study finds that there existed a positive correlation between spirituality, mindfulness, and SWB.
7.	Chen, H., Liu, <i>et al.</i> (2019). How flow and mindfulness interact with each other in different types of mandala coloring activities?	The researcher studied that there is a significant positive relationship between mindfulness and other aspects in some dimensions of flow. However, it has been seen that free mandala is challenging for participants in the low-skilled group, nonetheless teamwork in a cooperative mandala can be effective and help them to overcome this challenge. Thus, the study provides a reference for further understanding of the mechanisms of how mandala coloring can help improve subjects' mental state and enhance positive psychology.	The study found that short-term mandala coloring exercises cannot improve mindfulness but can significantly improve the flow state.
8.	Kim, H., Kim, et al, J.-S. (2018). Effects of	The study aimed to investigate whether Mandala art therapy can improve psychiatric inpatients' subjective	The study concluded that Mandala art therapy can be a

	mandala art therapy on subjective well-being, resilience, and hope in psychiatric inpatients.	well-being, resilience, and hope, which are factors necessary for their rehabilitation. The study found that Mandala art therapy had a positive effect on the subjective well-being, resilience, and hope of psychiatric inpatients. Previous research on Mandala art therapy has also demonstrated its positive psychological effects on diverse groups.	useful activity program for psychiatric inpatients who need to integrate reality and imagination.
9.	Hasnida, Dr., & Meutia, A. (2018). The effectiveness mandala therapy on coping stress.	The study conducted by Hasnida and Amalia Meutia provides evidence-based research on the benefits of Mandala coloring therapy in reducing stress levels. The study involved 32 participants aged between 21-40 years old, consisting of 21 women and 11 men, who were divided into two groups, 21 of whom were lecturers, and the remaining 11 were college students. The participants completed the Perceived Stress Scale before and after receiving Mandala coloring therapy. The results showed that Mandala coloring therapy significantly reduced the stress levels of the participants. The correlation contribution to the decrease of stress level was 15%, while 85% was caused by other factors.	The study concludes that Mandala coloring therapy can be an effective tool in reducing stress levels and can be used as a complementary therapy in managing stress.
10.	Mantzios, M., & Giannou, K. (2018). When did coloring books become mindful? exploring the effectiveness of a novel method of mindfulness-guided instructions for coloring books to increase mindfulness and decrease anxiety.	The study explored the effectiveness of mindfulness-guided instructions for coloring books in increasing mindfulness and decreasing anxiety. The study also suggests that the prolonged and repetitive use of coloring books has not been investigated and may well indicate different findings. The study concludes that future research with a larger and more diverse sample is required to explore the relationship between coloring books and mindfulness.	The findings suggest that both interventions were not uniformly assisting participants in increasing mindfulness and decreasing anxiety. However, the data suggest that increasing levels of mindfulness are similar amongst the two interventions, while with state anxiety, approximately 20% more participants benefited from becoming less anxious in the mindfully guided group.
11.	Ashlock, L. <i>et al.</i> (2018). The effectiveness of structured coloring activities for anxiety reduction.	The study aimed to compare the effectiveness of different coloring activities in reducing anxiety levels. The results showed that all intervention groups had a significant reduction in anxiety levels, but there was no significant difference in effectiveness between the groups. However, the free-form coloring book condition tended towards less effectiveness compared to the other, more structured conditions.	The study concluded that adult coloring books are as effective as other coloring activities in reducing anxiety levels.
12.	Kostyunina, Yu, <i>et al.</i> (2016, April 17). <i>Adolescents' school anxiety correction by means of mandala art therapy.</i>	The context mentions an experiment that was conducted to evaluate the effectiveness of using mandalas for relaxation and stress relief among adolescents. The study also found that working with adolescents was easy for many reasons, some of them were the willingness and engagement in the working process. Nonetheless, at the control stage of the experiment, it was shown that the results before and after the forming stages of the experiment were analyzed, and carrying out of the statistical data processing to confirm the hypothesis (by Student's t-test for dependent samples). The results showed that a high level of anxiety has decreased from 16.5% to 8.9%, plus, the number of students with low levels of anxiety has increased by 6.3%. Later on, the study also found that the number of respondents with a low level of school motivation fell by 3, 7%, and school incongruity was found only in 2.5% of students (2 persons).	The study found that repetitive actions of hands while painting mandalas soothe and require concentration, thereby removing internal stress. The results showed that a high level of anxiety has decreased in the participants.
13.	Van der Vennet, R., & Serice, S. (2012). Can coloring mandalas reduce anxiety? A replication study.	This experiment is a copy of Curry and Kasser's (2005) study, which tested whether a colored mandala reduces anxiety. After highlighting by writing, participants were assigned to one of three groups to color a mandala pattern, a grid, or a blank sheet of paper. Stress levels were measured by State Latency at baseline, after typing, and after colour.	The results support the hypothesis that painting a mandala reduces stress more than painting on a plaid pattern or white paper.
14.	Shakya, M. (1970). Basic concepts of Mandala.	The paper "Basic Concepts of Mandala" by Milan Shakya provides an overview of the Mandala concept in the oriental civilization. The paper discusses the origin, symbolism, and significance of the Mandala in various aspects of life, including art, religion, and meditation. The paper also discusses the various symbols used in Mandala art, including the circle, square, triangle, lotus, sun and moon, geometric shapes, and animals..	The paper provides a comprehensive overview of the Mandala concept and its significance in oriental civilization. However, the paper does not present any specific findings or research results, as it is more of a conceptual and theoretical discussion of the Mandala concept

Findings:

The findings of this review paper suggest that mandala coloring can be an effective mindfulness tool for stress management and improved focus. Research studies have shown that engaging in mandala coloring can increase mindfulness in young people. The act of coloring intricate patterns in a mandala promotes focused attention and present-moment awareness, allowing individuals to immerse themselves in the creative process and experience a sense of relaxation.

Furthermore, mandala coloring has been found to alleviate anxiety. The repetitive and symmetrical patterns in mandalas can have a calming effect on the mind, helping individuals to reduce stress and find a sense of inner peace. The therapeutic benefits of mandala coloring have been observed in art therapy settings, where it has been used as a tool for self-expression and emotional healing.

By following the procedure, individuals can create their own mandalas or color pre-designed mandalas, incorporating elements of nature into the process. This nature-based approach adds an additional dimension to the therapeutic experience, connecting individuals with the soothing and grounding qualities of the natural world.



Source: Researcher's own conception

1. Stress reduction: Mandala coloring has been found to alleviate anxiety and reduce symptoms of stress, providing individuals with a creative and relaxing outlet for self-expression.

2. Improved focus: The act of coloring intricate patterns in a mandala promotes focused attention and present-moment awareness, allowing individuals to immerse themselves in the creative process and experience a sense of relaxation.

3. Increased creativity: Mandala coloring can increase creativity and provide individuals with a creative outlet for self-expression.

4. Mindfulness and healing: Engaging in mandala coloring can increase mindfulness and provide individuals with a therapeutic tool for emotional healing.

5. Nature-based approach: By incorporating elements of nature into the process, mandala coloring can connect individuals with the soothing and grounding qualities of the natural world, adding an additional dimension to the therapeutic experience. O

Conclusions:

In conclusion, mandala coloring shows as a potential mindfulness tool for stress management and improved focus. Engaging in mandala coloring can increase mindfulness and provide individuals with a creative and relaxing outlet for self-expression. The repetitive and symmetrical patterns in mandalas, along with the nature-based approach, contribute to the therapeutic benefits of this practice.

Mandala coloring can be easily incorporated into daily routines and may serve as a cost-effective and accessible tool for individuals seeking stress reduction and improved focus. Further research is needed to explore the

long-term effects of mandala coloring and its potential benefits for specific populations, such as individuals with chronic pain or anxiety disorders.

Overall, mandala coloring offers a creative and enjoyable way to cultivate mindfulness, reduce stress, and enhance overall well-being. The findings of this review paper support the use of mandala coloring as a therapeutic tool in various settings, including art therapy, meditation, and self-regulation practices. Mandala art therapy is an effective mindfulness tool that has been used for centuries for its therapeutic benefits. By creating mandalas, we can reduce stress, achieve a state of mindfulness, and improve our overall sense of well-being. Incorporating this practice into our daily routine can help us to foster a sense of calmness and balance in our lives, leading to greater mental and emotional resilience.

In addition, mandala drawing has been found to improve mood and increase subjective well-being (SWB) due to its mechanism of inducing mindfulness (Jayachandran *et al.*, 2021). A theoretical understanding of the relationship between mindfulness and SWB has been highlighted (Li *et al.*, 2021).

Overall, In addition to reducing stress and promoting mindfulness, mandala coloring can also provide individuals with a creative and relaxing outlet for self-expression. The nature-based approach of incorporating elements of nature into the process adds an additional dimension to the therapeutic experience, connecting individuals with the soothing and grounding qualities of the natural world.

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