

Can Coloring Mandalas Reduce Work-Related Stress in HealthCare Professionals

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ABSTRACT

This qualitative study is designed to determine if coloring mandalas can reduce work-related stress in healthcare professionals. Participants completed a series of response questions specifically designed for this study after coloring a pre-drawn mandala which allowed participants to reflect on the art-making process. Participants identified common stressors in their work environment and discussed current coping strategies used to reduce stress.

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Introduction

Work-related stress is very prevalent among healthcare professionals due to the high demands and stressors placed upon them. The medical field can be very emotionally draining as healthcare professionals have large workloads, are witness to patient suffering, and act as a support system for patients and their families (Smith, 2014). There are several demographics and characteristics that can impact work related stress such as, high levels of responsibility, job complexity, role ambiguity, lack of job control, heavy workloads, lack of opportunities for intellectual and professional growth, inadequate leadership, and poor social support by supervisor and / or colleagues (Bogaert et al., 2014). Due to the problematic effects of excess stress on individuals, it is highly important to find effective coping strategies and stress management techniques to reduce the negative side effects of stress on healthcare professionals.

Statement of the Problem

To date, there is little research or evidence of the effectiveness of mandala usage to reduce stress and anxiety within healthcare professionals. Many published studies with the usage of mandalas have been conducted with college students. According to Smith (2014), drawing conclusions about stress and anxiety reduction techniques with students may not be representative of healthcare professionals, as academic stressors and anxieties are completely different from the stressors experienced by healthcare professionals. Work related stress can be associated with changes in cognitive, behavioral, and emotional functions (Cox, Griffiths, & Rial-Gonzalez, 2000). The amount of workplace stress among nurses and other healthcare professionals drives the need to identify interventions to help healthcare professionals learn to effectively cope with work-related stress to help improve job satisfaction, decrease rates of burnout, and improve the quality of patient care (Smith, 2014). Due to the challenges and

pressures placed upon healthcare professionals coping techniques are needed to increase self-awareness and deal with work related stress in a safe and healthy way.

Research Question

Will the coloring of a mandala effectively reduce work-related stress in practicing healthcare professionals, as it has been reported to effectively reduce stress amongst college students?

Basic Assumptions

Coloring mandalas may offer healthcare professionals an effective strategy to manage work-related stress.

Purpose of the Study

The purpose of this pilot study was to identify a positive coping intervention to reduce work-related stress in healthcare professionals. The potential benefits of coloring mandalas have not been explored with work-related stress. Therefore, to determine if there are real world applications for coloring mandalas as a mindfulness technique, further assessments must be completed. The present study is designed to explore the potential benefits of coloring mandalas in reducing work-place stress. Participants at a medical clinic were given a series of response questions designed specifically for this study by the researcher after coloring a pre-drawn mandala (Fig.1). Participants were given the opportunity to reflect on the cause of their work-related stress and discuss their current mood state once they completed the directive and answered the response questions. Participants responded on their experience coloring the mandala and discussed whether they would use this technique as a coping mechanism in the future.

Hypothesis

It is hypothesized that healthcare professionals who engage in this pilot research study will identify potential work-related stress and become aware of the stress reduction benefits of coloring mandalas.

Review of the Literature

Stressful work environments place high demands on a person without any support to manage symptoms (National Institute for Health and Care Excellence (NICE), 2009). Within the work context, work-related stress is an issue with a strong impact on employees, organizations, and communities (Hodapp, Tanzer, Korunka, Maier, & Pestemer, 2005). Employees in healthcare are among those with the highest rates of self-reported stress, anxiety, and depression (NICE, 2009). Excess stress may negatively impact individual's work performance and other areas of one's life. Ineffective coping among medical professionals can lead to a decreased ability to focus on patient needs, and may put healthcare employees at risk for depersonalization (Smith, 2014). Stressors as objective conditions within working systems are not only regarded to be major sources of strain, job dissatisfaction, and burnout, but are often made responsible for high turnover rates and the unpleasant image of the health care field in general (Bussing & Glaser, 1999).

Description and Diagnosis

Healthcare professionals have long been regarded to have high risk for developing stress-related problems as they face stressors that are not part of most other occupations (Calboun & Calboun, 1993). Burke (2013) defined work-related stress as the adverse reaction people have to excessive pressures or other types of demand placed on them at work. Work related stress may be attributed to differences in individual values and environmental opportunities to fulfill these values or from environmental demands that exceed the individual's knowledge or skill base (Bussing & Glaser, 1999). Work stressors are viewed as obstacles, barriers, or hindrances to the work process, and may result in disruptions in the work process (Greiner & Leitner, 1997).

Etiology

Lu, Shiau, and Cooper's (1997) study found that compared to industrial workers, clinical nurses experienced higher worker stress, more physical and mental ill-health, lower job satisfaction, and made more efforts to cope with work stress. Bunce and West's (1994) study of 333 healthcare professionals determined that some of the causes of work-related stress were dealing with other colleagues, dealing with patient's needs, home-work interface, dealing with death and suffering, lack of material resources, overwork, procedural difficulties, role ambiguity and role conflict, and organizational issues. Smith (2014) described some of the main causes of work-related stress in modern nursing results from dealing with caring for dying patients, the witnessing of patient suffering, and acting as a support system for patients and their families. Other stressors placed upon healthcare professionals include budget deficits, the complex needs of patients, short acute care lengths of patient stays, the need for increased knowledge of ever-changing technology, shortages and poor staffing, long work hours, limited resources, and feelings of lack of control (McCloskey & Taggart, 2010).

Prevalence

The reality of ineffective coping among healthcare professionals drives the need to identify coping mechanisms to help healthcare professionals learn to effectively cope with mounting work-related stress and improve job satisfaction, decrease rates of burnout, and improve quality of patient care (Beddoe & Murphy, 2004). Stress at work may cause an estimated half of nonattendance, 40% of workplace turnover, reduction in workplace productivity, and has serious consequences for both employees and organizations (Lu, Shiau, & Cooper, 2007). Ineffective coping affects both healthcare professionals and patients. Healthcare professionals' stress levels have been associated with decreased ability to focus on the needs of

patients (Smith, 2014). Ineffective coping with stress has also been associated with changes in cognitive, behavioral, emotional functions, sleep disturbances, interference with relationships at home, inability to focus, increased utilization of sick time, and burnout (McCloskey & Taggart, 2010). The extent to which healthcare professionals learn to cope effectively with the stresses of work has important implications for their continued well-being and productivity (Gellis, 2002).

There is little research done exploring the impact of art forms other than music on healthcare staff (Wilson, Bungay, Munn-Giddings & Boyce, 2016). Research suggests that healthcare professionals who are experiencing burnout symptoms may retreat into defensiveness and psychological escape from stressful reality (Italia, Favara-Scacco, Cataldo, & Russo, 2008). Healthcare professionals experiencing high levels of workplace stress may find it difficult to verbally express symptoms.

Treatment

Eliminating work related stress for healthcare professionals is not an obtainable goal. When stressors are present, people will use various coping strategies, both cognitive and behavioral to alleviate their impact (Folkman & Lazarus, 1993). Burke (2013) found that there has been an emphasis placed on different coping mechanisms to manage stress such as emotion-focused strategies (reflection, peer support), life-style changes (diet, exercise) and problem focused strategies (time-management, clinical supervision).

It has also been found that interventions such as meditation and mindfulness had been successful in dealing with stress among a variety of professions (Smith, 2014). There is also research that has identified that mindfulness based art techniques as a form of meditation and stress reduction. The process of ‘mindful art making’ incorporates the physical and creative manipulation of materials of art making with the benefits of mindfulness and meditation (Abbott,

Shanahan & Neufield, 2013). Healthcare professionals may benefit from utilizing mindful art based techniques, such as mandalas, to decrease stress levels.

Art Therapy Approaches

Bell and Robbins (2007) investigated the common premise in art therapy that the production of art can have “stress-reducing or relaxing effects”. Walsch, Chang, Schmidt, and Yoepp (2005) reported that college students who participated in art-making activities experienced less stress and anxiety than those who did not engage in art making.

One technique that has been utilized to reduce stress and anxiety is coloring the intricacies of the symmetrical shapes within a structured circular mandala which blend art therapy with the calming effects of meditation. (Curry & Kasser, 2005). Although coloring therapy does not encompass all elements of either art therapy or meditation, it may help encourage a state of deep engagement brought about through artistic expression and may help decrease people’s experience of anxiety (Curry & Kasser, 2005). Mandalas have been defined as ‘magic circle’, ‘symbols of the cosmic elements’, ‘an aid in meditation’, ‘an aid in self-discovery’, or ‘meditation on the transcendental’ (Brauen, 1997). Historically, mandalas have been used as a guide for meditation practices in many Asian traditions and are seen as objects of devotion in Tantric Hindu and in Tantric Buddhism (Violatti, 2013). In Buddhist tradition, mandalas are objects of meditation with a specific purpose to transform ordinary perception of the world into a pure perception of the Buddha nature which permeates all phenomena (Brauen, 1997). The structure of the mandala itself can be viewed as a representation of the ego, but can vary within spiritual practices. Mandalas typically are divided into five sections which correspond to the five structural elements of the human personality or the five senses of the body (Tucci, 1961).

Mandalas are thought to have a therapeutic aspect as they are vehicle for concentrating the mind so that it may pass beyond its usual restraints. Mandalas symbolize various levels of awareness within the individual as well as the energy that unifies and heals (Argüelles & Argüelles, 1972). Jung (1972) believed that a mandala occurs in conditions of psychic dissociation or disorientation within individuals who, as the result of neurosis and its treatment, are confronted with the problem of opposites in human nature and are then consequently disoriented. Mandalas have the purpose of subconsciously reducing the confusion to order as they express order, balance and wholeness (Jung, 1972). Jung (1972) also believed that mandalas are an expression of the self and the path to the center, to individuation.

Curry and Kasser's (2005) research examined whether or not the coloring of pre-structured mandalas was more effective in reducing anxiety compared to a complex plaid design. The results from their study showed that mandalas and plaid designs were both equally effective for anxiety reduction. Their findings suggest that coloring a prepared mandala requires little creative thought and thus encourages a "trance-like" state of relaxation. Van der Vennet and Serice (2012) replicated Curry and Kasser's (2005) research to determine if coloring the mandala had any unique properties in anxiety reduction. Van der Vennet and Serice (2012) claimed that coloring a mandala reduced participant's anxiety to a greater degree than coloring on a blank sheet of paper which was also established in Curry and Kasser's (2005) work. However, Van der Vennet and Serice found that the mandala design produced a greater reduction in anxiety in their study. Another study in which the effects of the use of the mindfulness art making was examined in a sample of 57 undergraduate students to determine if art making can reduce anxiety and offer methods for helping college students and others cope with stress (Sandmire, Graham, Rankin, & Grimm, 2012). Sandmire et al., (2012) found that a brief period of art making activities such as

coloring pre-designed mandalas, free-form painting, collage making, still-life drawing, and modeling with clay can significantly reduce a person's state of anxiety.

Italia, Favara, Cataldo, and Russo's (2007) study found that art therapy techniques such as psychodrama and relaxation techniques demonstrated effectiveness in decreasing burnout symptoms in a group of 33 oncology doctors and nurses. Van Westrhenen and Fritz (2012) found that hospice workers who participated in collaborative art-making tasks saw a significant reduction in burnout and stress as evident during the intervention as participants frequently verbalized they found the activity to be relaxing, enjoyable, and therapeutic.

Summary

The benefits of coloring mandalas have not been explored with work-related stress, especially in healthcare professionals. Therefore, to determine if there are real world applications for the coloring of pre-drawn mandalas as a mindfulness technique further assessments must be completed. The present study is designed to explore the potential benefits of coloring mandalas in reducing work-place stress in healthcare professionals.

Methodology

Participants

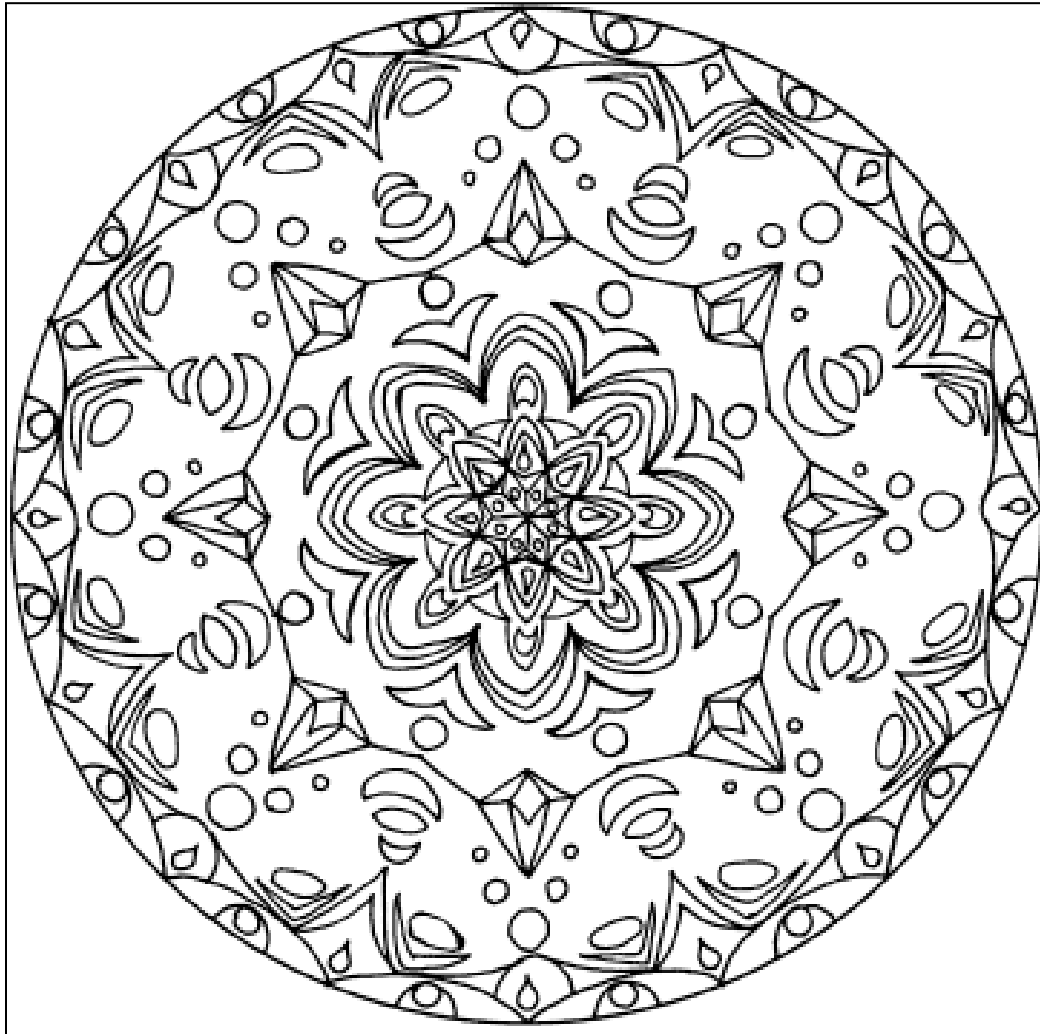
Twenty- one participants were recruited for this study from a small medical clinic in the Midwest (20 females, 1 male). The age range of participants was 35 to 64 years old. Participants ranged in job title. They included nurses, research and procedure manager, scheduling coordinator, phlebotomist, medical transcriptionists, and receptionists. The average length of time participants have worked in their position was 13 years, although this varied widely from .5 to 25 years. The recruitment for the study was open to all healthcare professionals employed at the clinic. Permission from the medical clinic's clinical coordinator was granted to conduct the research study. Participants were recruited through a voluntary sign-up sheet that was posted at the facility prior to the study. All participants signed informed consent forms (Appendix A) prior to participation.

Research Design

The study consisted of a 90-minute pilot study at the medical clinic after work hours. Participants joined the study in intervals throughout the timeframe of the study once their shift ended. Participants completed the study in a designated area at the medical clinic in their conference room. Participants were asked to sign informed consent forms (Appendix A) and were asked to color the pre-drawn mandala (Figure 1) for a minimum of 15 minutes. Each participant was provided with a 12-count box of Crayola colored pencils in an assortment of colors and a pre-drawn structured mandala. The structured mandala chosen for this pilot study was similar to the mandala used in Curry & Kasser's (2005) and Van der Venet & Serice's (2012) work having the same 324 areas of various shapes and sizes. A pre-drawn mandala was chosen over creating an original mandala as it was believed that creating an original mandala may produce stress within participants in choosing how to structure their design. Both Curry and

Kasser (2005) and Van der Venet and Serice (2012) found that participants creating a free-form design struggled with direction and structure and showed no reduction in anxiety.

Figure 1. Mandala Design (Available from www.free-mandala.com)



After completing the mandala, each participant was asked to complete a series of response questions specifically designed for this study to gauge participant's current experience of stress in the work place. The response questions were given to participants after coloring a pre-drawn mandala. The series of response questions included open-ended questions designed to gain an understanding of one's psychological experience of work-related stress.

The research questions were as follows:

1. Describe your work duties as they pertain to your job title.
2. List the most common stressors in your work environment.
3. Describe your current level of stress.
4. What activities and how often do you engage in these activities to reduce stress?
5. What did you like/dislike about coloring mandalas?
6. Do you feel that coloring mandalas is an effective way of reducing stress?
7. How likely are you to use mandalas when feeling stress in the future?

Data Analysis

Data analysis focused on discovering themes within participant's responses using Interpretative Phenomenological Analysis (IPA). Once themes were discovered the data was coded and categories were analyzed to determine theme connections. IPA is phenomenological in its detailed examination of the personal lived experience of practical engagement with the world and in exploring how participants make sense of their experience (Shinebourne, 2011). IPA was used to gather and analyze the data collected to generate concepts and interrelated categories to focus on participant's experiences.

Each questionnaire was analyzed using IPA. The analysis followed the staged process outlined by Shinebourne (2011), where each questionnaire is initially analyzed separately. In the final stage of IPA superordinate themes and sub-themes were identified.

Ethical Implications

This study adheres to the American Art Therapy Association (AATA) Ethical Principles for Art Therapists ethics code regarding responsibility to research participants (AATA, 2013). To ensure that the research was conducted in conjunction with AATA and ATCB ethical guidelines, this pilot study was reviewed and approved by the Intuitional Review Board of Saint Mary College of the Woods. Participants were informed of the nature of the research prior to participation in the study. All participants agreed to participate voluntarily and informed consent (Appendix A) was obtained from all participants. All participants could withdraw from the study at any time if they wished to stop participating. All participants are anonymous and all identifying information was removed from responses after it was received. All completed response questions and informed consents were stored in a locked container in a separate location and access to information was restricted to the researcher and supervising ATR's access only.

Results

The results of this research study depict the common themes found within the data as well as details of individual participant's experiences. Shared themes were found in relation to each research question.

Common Stressors at work

Shared themes regarding stressors at work were coded into the following categories: direct patient care, phone calls, insurance companies, time management, interpersonal issues, management issues, and fast paced work environment.

Thirty-four percent of participants reported that meeting patient needs was a cause of their stress, which was the highest cause of work-related stress reported (Table 1). Participants reported that attempts to get patients seen in a timely manner and scheduling immediate appointments was also a cause of stress. Patients were described as 'irate', 'cranky', 'crazy', 'demanding' and 'rude'.

Table 1

Common Stressors at Work

	Frequency	Percent
Direct Patient Care	10	43.4%
Phone Calls	3	10.3%
Insurance Companies	2	6.9%
Time Management	5	17.3%
Interpersonal Issues	4	13.8%
Management Issues	2	6.9%
Fast Pace Environment	3	10.3%

Time management was also a common stressor reported within participants at 17.3%.

Participants described their work environment as ‘high paced’ and ‘stressful’. Participants also stated that meeting deadlines and ‘being rushed’ was also a common stressor.

Current Level of Stress

Participants rated their stress in a variation of responses. Numeric responses were used as well as a range from low to high (Table 2) Thirty-three percent of respondents reported feeling no stress at all which also include feeling ‘peaceful’ or ‘relaxed’. Thirty-three percent of participants also reported having low stress. Twenty-three percent of participant’s reported medium to moderate stress levels. Nine and a half percent of respondents reported having a high level of stress. One participant reported that they enjoyed coloring, but the noise level in the room increased their stress. There were also participants who reported high stress earlier in the day, but lower after coloring.

Table 2

Current Level of Stress

	Frequency	Percent
High	2	9.5%
Moderate	7	33.3%
Low	7	33.3%
None	5	23.8%

Coping Strategies

Shared themes regarding current coping strategies were coded into the following categories: exercise, spending time outdoors, spending time with family and friends, drinking alcohol, reading, watching television, listening to music, and pets.

Table 3 shows that exercise and participating in physical activity were the highest reported coping strategy among participants at 31.8%. Yoga, running, working out, going for a walk, and going to the gym were among the activities reported. Twenty-five percent of participants reported that spending time outdoors was also highly utilized in reducing stress among participants. Few participants provided a frequency of time spent utilizing their coping strategies. However, four participants did report daily use of exercise as a coping strategy to reduce stress.

Table 3

Coping Strategies

	Frequency	Percent
Exercise	14	31.8%
Spending Time Outdoors	11	25%
Spending Time with Family and Friends	3	6.8%
Drinking Alcohol	2	4.5%
Reading	5	11.5%
Watching Television	3	6.8%
Music	3	6.8%
Pets	3	6.8%

Response to coloring mandalas

Shared themes regarding participant's response to coloring mandalas were coded into the following categories: stress relief, enjoyment, and time consuming.

Table 4 shows that 84% of participants found the directive to be relaxing or enjoyable. Forty percent of participants felt that coloring the mandala was calming and took their mind of work. Sixteen percent of participants felt that the design was too intricate and felt they needed more time to fill it in. Others reported an enjoyment in creating something and using their creativity. One participant stated that they liked coloring the mandala, however they prefer to do something more active. Another participant stated they enjoyed coloring, but felt that the noise level in the room was too high.

Table 4

Response to Coloring Mandalas

	Frequency	Percent
Stress Relief	10	40%
Enjoyment	11	44%
Time Consuming	4	16%

Reduction in Stress

Participant's reduction of stress outlined in Table 5 shows that 95% of participants stated that they felt that coloring mandalas reduced their stress levels. One participant reported that they were 'not sure' whether coloring mandalas reduced their stress level. Responses included within the participants who felt mandalas reduced their level of stress were 'yes, when time allows',

‘absolutely’, ‘surprisingly do after coloring today’, and ‘previously thought it wouldn’t be relaxing’.

Table 5

Reduction in Stress

	Frequency	Percent
Yes	20	95.2%
Not Sure	1	4.8%

Use in the future

Table 6 refers to how likely clients felt they would utilize mandalas when feeling stressed in the future. Thirty-eight percent of participants felt they were very likely to use mandalas when feeling stressed in the future. Thirty-three percent of participants stated that there is a possibility they may utilize the coloring of mandalas in the future. Nineteen percent reported that they would not use mandalas as a form of coping with stressed. Some participants reported having coloring books at home that they already use. Others stated they would utilize if designs were not too intricate. Two respondents (9.5%) felt that they would not utilize the strategy now, but may utilize once retired.

Table 6

Use in the Future

	Frequency	Percent
Very Likely	8	38%
Possibly	7	33.3%
Not Likely	4	19%
During Retirement	2	9.5%

Discussion

Based on the results of this study, the original hypothesis stating healthcare professionals who engage in coloring mandalas will identify potential work-related stress and become aware of the stress reduction benefits of coloring mandalas was supported. Participants identified common stressors in their work environment, and majority of participants reported that they enjoyed coloring mandalas. Ninety-five percent of participants felt that coloring mandalas was an effective way to reduce stress.

This study was aimed at testing if coloring a pre-drawn mandala will benefit healthcare professionals in reducing work-related stress. Participants reported that coloring mandalas was an effective way of reducing stress. However, when rating their current level of stress, it was unclear if participants stress levels decreased after coloring mandalas. Fifty-seven percent of participants rated their current stress level as low or none after coloring mandalas, but it is unclear if all participants rated their stress levels in relation to how they felt in the current moment after coloring their mandala, or if they described their overall current levels of stress in general.

This pilot study aimed at identifying a positive coping mechanism for healthcare professionals. Participants felt that coloring mandalas can relieve stress, however it does not appear as if they will utilize it as a coping mechanism. This is evidenced by vague responses such as ‘somewhat likely’, ‘I think I will give it a try’, and ‘a possibility’.

Limitations

There were several limitations of the present pilot study. The small sample size of 21 participants is a limitation of the study as participants are not representative of all healthcare professionals. Further studies may wish to include doctors, surgeons, pharmacists and other

professionals in the healthcare field. The study was also lacking in diversity as 95% of participants were female. This study is also limited by the self-report measures of stress, which may not accurately reflect participants actual stress levels. Another limitation was the wording of the questionnaire. Questions were not open-ended enough to produce in-depth accounts of the participant's experiences. There were also some clarity limitations to questions which may have limited findings as well. Specifically, questions regarding participant's current level of stress may have not been clear to participants. It is unknown if participants rated stress levels directly relating to after coloring mandalas or their current stress levels of everyday life. Specific wording stating 'after coloring mandalas' would have been valuable to the results of this study. There were also time constraints to the study. Participants were instructed to color for a minimum of fifteen minutes. A longer period to color may potentially decrease participants stress levels further. Another limitation of the study was at least one person reported that the room was too noisy to be relaxing which may have interfered with participants' stress levels.

Recommendations

Future studies should aim to include a larger sample size of individuals with more diverse backgrounds and gender. Further experimentation in interviewing participants would allow for a deeper understanding of participant's experience as the questions provided on the questionnaire were very brief. Future studies should also be done to examine the effectiveness of mandala creation versus coloring a pre-structured mandala.

Conclusion

The purpose of this pilot study was to identify a positive coping intervention to reduce work related stress in healthcare professionals. Seventy-one percent of participants stated that they were either very likely or may possibly utilize mandalas when feeling stressed in the future.

Some participants reported a surprise in their stress reduction after coloring mandalas. This pilot study provides insight into common workplace stressors in healthcare professions including: direct patient care, phone calls, working with insurance companies, time management, interpersonal and management issues, and fast pace work environment. Current coping strategies and frequency of use was also looked at. This pilot study provides beneficial information regarding stress management in healthcare professionals and their experiences of workplace stress.

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Appendix A

**Saint Mary-of-the-Woods College
1 St. Mary of the Woods, Indiana 47876**

Informed Consent

Primary Researcher: Jill McNutt ATR-BC, ATRL, LPC (jmcnutt@smwc.edu)

Co-Researcher: Ashley Trosper, BA (ashley.trosper@smwc.edu)

Co-Researcher: Patricia Grajkowski, ATR-BC, LPC-AT/S, LMFT (pgrajkowski@smwc.edu)

Purpose of the Study: The purpose of this study is to identify a positive coping intervention to reduce stress and anxieties in Healthcare Professionals. The benefits of coloring mandalas have not been explored with work-related stress. Therefore, to determine if there are real world applications for mandala creation as a mindfulness technique further assessments must be completed. The present study is designed to explore the benefits of coloring mandalas in reducing work-place stress and anxieties. Participants at a medical clinic will be given a series of response questions after coloring a pre-drawn mandala. Participants will be given the opportunity to reflect on the cause of their work-related stress and discuss their current mood state once they have completed the intervention and answered the response questions. This study is also to fulfill a partial requirement for the Master of Arts in Art Therapy Degree for graduate student Ashley Trosper at Saint Mary-of-the-Woods College.

Confidentiality:

- Only co-researcher and supervising art therapist has access to completed response questions
- No personal identifying information will be used for the purposes of this study
- You have the option to withdraw your consent to share information at any time if you no longer feel comfortable with the arrangement.
- During the study, all data will be kept in a locked, secure, filing cabinet in a separate location only accessible to co-researcher and supervising art therapist

Potential Risks and Discomforts:

- It is anticipated that no physical, social or economic risks are posed to participants. However, if something should arise that needs to be explored, researcher's supervisor will be available for consultation.
- Participating in the study will not affect your employment, and no information gained from this study will be provided to your employer.

You will be given a copy of the full Informed Consent Form

I have read the information, or it has been read to me. I have had the opportunity to ask questions about it and any questions that I have asked have been answered to my satisfaction. I consent voluntarily to participate as a participant in this research.

Name of Participant

Date

Signature