The Benefits of Coloring Mandalas with Older Adults

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ABSTRACT

This study explored the benefits of coloring mandalas for the older adult population. The 20 participants aged between sixty-two and ninety-one, gauged their stress level with a pre and post stress scale before and after coloring the mandalas, and also answered a questionnaire sharing their experiences of this art directive. The results from this study indicated that coloring mandalas with the older adult population can reduce stress. The participants also enjoyed the social aspect of this study. The participants reported that the action of coloring was relaxing. Further research was recommended.
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CHAPTER I

Introduction

There was limited research investigating the use of expressive therapies with older adults, and an even smaller amount of research concerning older adults that were not suffering from the symptoms of dementia and Alzheimer’s disease. According to Stephenson (2013), there has been a shift in the focus of the health care system. Since the Affordable Care Act of 2010, there has been a call to research “promising practices and innovative approaches to prevention and integrative health” (National Prevention Council, 2011, p. 8). By 2030, the number of people aged 65 and older was predicted to increase, representing 20% of the total U.S. population (U.S. Department of Health and Human Services, 2013).

Art therapy has been used as an effective tool to use with the older adult population. Stephenson (2013) stated that art therapy was used to “promote health and prevent or prolong the need for medical intervention” (p. 151). Art therapy provided opportunity for community, promote overall wellness, increase self-esteem, and help develop identity (Stephenson, 2013, p. 151). According to Curry and Kaser (2005), the act of coloring specifically reduced anxiety and stress.

Problem Statement

This research study investigated the benefits of coloring a pre-fabricated mandala. There were several studies conducted that have explored how coloring can reduce anxiety or stress, and how it can help a person gain personal insight and self-expression (Fincher, 2004). There have also been studies that explored how mandalas were symbols that represented a person’s individuality (Dellios, 2003). These studies were important because they explored the use of mandalas, but there was a lack of research regarding the use of mandalas with the older adult population.
Research Questions

The study was guided by the question: What are the benefits of coloring mandalas for older adults and why?

Basic Assumptions

The older adult population has been growing larger. As older adults age and retire, they have experienced more free time. Aging has shown an increasing need for older adults to exercise their bodies and their minds, which has contributed to their overall health. Coloring mandalas has provided a healthy outlet for older adults. It aided older adults in self-expression, helped them exercise their motor skills, helped them exercise their memories, and provided a healthy, creative activity for older adults to take part in.

Statement of Purpose

This study’s purpose was to explore the potential benefits for older adults coloring pre-drawn mandalas. The aim of the study was to better understand how coloring could be used with the aging population, in aiding with major changes that they may be experiencing while aging. This researcher wanted to understand how coloring could benefit the older adult population. Coloring had the potential to reduce stress, anxiety and to help combat loneliness if used in a group setting.

Hypothesis

The researcher expected that coloring mandalas would provide meditation and relaxation to the participants. In addition, coloring encouraged participants to pursue coloring on their own, outside of the study. The researcher also expected to see evidence suggesting the need for participants to take part in art activities, like coloring, that can potentially benefit older adults overall well-being.
Definition of Terms

Mandala. A circle shape known from the Sanskrit language of India, meaning sacred circle (Fincher, 2010).

Older adults. Although older adults have been defined as 65 years and older (Hunter, Goodie, Oordt, & Dobmeyer, 2017), for this study, that definition referred to those 55 years of age and older.

Baby boomers. Individuals who were born right after World War II, between the years of 1946-1964 (The Gerontological Society of America [GSA], 2012).

Sandwich generation stress. The experience of tension brought about by having to take care of a child and a parent during the same time (Tarantine, 2014).

Justification of the Study

There was a lack of empirical research surrounding the older adult population. There was also limited research about the older adult population utilizing art therapy. The researcher worked in a retirement community for several years and recognized a need for creative arts, especially art therapy. Art therapy can be utilized with a majority of the older adult population, no matter the participant’s level of artistic ability. This study explored whether there was a need for art with the older adult population and how it could be beneficial.
CHAPTER II

Literature Review

The Older Adult Population

According to the Administration on Aging (2015) in America, one in seven persons were categorized as being in the older adult population. By the year 2030, the number of older adults was projected to increase by 60%, reaching over one billion older adults globally or about 12% of the world’s population (He, Goodkind, & Kowal, 2016). Although people are living longer there are still changes that happen within the body and mind (U. S. National Library of Medicine, [NLM], 2015). The U.S. NLM (2015) explained that some change occurs naturally while aging, but there were some symptoms that were more important to pay attention to that could be a warning sign of a medical or mental health issue. About one in four older adults have experienced a mental disorder, including depression, anxiety disorder, and dementia (National Council on Aging, [NCA], 2017). About seven million older adults in America suffer from depression and many do not receive treatment (NCA, 2017). Depression in an older adult can be associated with conditions like heart disease, diabetes and stroke (National Institute of Mental Health, [NIMH], 2017).) Many baby boomers suffer from chronic diseases like hypertension, cancer, and arthritis (GSA, 2012). The NIMH (2017) explains that depression may be overlooked and seen as frailty or an inevitable result of life changes, chronic illness, and disability within the older adult population.

Alzheimer’s disease was the most common form of dementia (Alzheimer Association, 2017). Since 2000, there has been an increase in deaths due to Alzheimer’s disease. The Alzheimer’s Association (2017) reported that 89% of older adults were diagnosed with this disease making it the sixth leading cause of death in the United States. According to the
Alzheimer’s Association (2017) the rate of the disease was so high that one person was diagnosed with the disease every 60 seconds.

In addition to dementia, the older adult population faced the risks of illness such as heart disease, cancer, arthritis, joint replacement, and sandwich generation stress (GSA, 2012). According to the World Health Organization (2016) depression and dementia were the two main mental health illnesses they have seen in the older adult population. Depression was often under diagnosed and undertreated because the symptoms can be seen as other diseases.

According to the psychologist, Erik Erikson (1950) and his psychosocial theory, individuals aged 65 years and older have resolved the developmental phase of ego integrity versus despair. Older adults also suffer from a wide range of bereavement, like death of a loved one and loss physical movement or mental cognition (Mental Health America, [MHA], 2017). Bereavement can be expressed physically, emotionally and psychologically (MHA, 2017).

**Art and the Older Adult Population**

Illness and poor functioning were often associated with aging. Approximately 92% of older adults have experienced at least one chronic illness in their life (NCA, 2017). However, the National Center for Health Statistics (2007) reported that almost three quarters of the older adult population described their health as good or excellent/very good. Art therapy with the cognitive component was often considered in the treatment of the elderly in order to heighten their mental functioning (Wald, 1984, 2003). Wadeson (2000) wrote that residents in assisted living communities have few opportunities for changing environments as a result of many contributing factors, including the loss of driving and physical limitations. Therefore, a principal goal of art therapy programs seen in those settings is to promote sensory stimulation in order to improve quality of life (Hinz, 2010).
Art has been a powerful activity for older adults (Assisted Living Federation of America & American Art Therapy Association [AATA], 2013). The aging population benefited from exposure to art (Hunter et al., 2017). Noice, Noice, and Kramer (2014) reviewed several studies and concluded that art benefited the older adult population by improving their quality of life. Multiple types of media like; clay, paint, and drawing have benefited the older adult population in many different ways (Hinz, 2010). In the review of Kim’s (2013) study, painting and clay art were reported to reduce anxiety, negative emotions and improved self-esteem in participants that were sixty-nine to eighty-seven-years-old. In Greer’s study (2013), painting improved the mental health, and provided a sense of calm and relaxation of participants who ranged in age from sixty-six to seventy-nine-years-old. In Reynolds’ (2010) study, residents’ ages sixty to eighty-six took part in painting, pottery and textile art. The participants reported their lives were more meaningful, enjoyable, and satisfying after taking part in creating the art. Phinney, Moody, and Small (2014) explored that participation in an art groups benefited the physical and social well-being of seniors. These studies showed the various benefits of creating art with older adults.

Art materials were an important consideration in art therapy (Gussak & Rosal, 2016). The researcher used colored pencils with the older adult participants. Colored pencils were considered a resistive media and according to the Expressive Therapies Continuum (ETC) they were used most often on the affective, perspective levels (Hinz, 2010). Hinz (2010) said that colored pencils were used in order to provide structure, predictability and consistency.

The History of Mandalas

Mandala means magic circle in Sanskrit (Couch, 1997). A mandala was considered to be much more than just a circle. It was believed to be a symbol of completeness, organizational structure, and wholeness (Couch, 1997; Dellios, 2003). A mandala has no beginning or end, and
can also symbolize wholeness (Couch, 1997). The construction of a mandala includes three principles: center, symmetry, and cardinal points (Dellios, 2003). The meanings of mandalas differ world wide, and religions use them for different things such as meditation and self-reflection.

**Southeast Asia.** In Southeast Asia mandalas were used to indicate political formations (Dellios, 2003). In addition to political formation, mandalas were used in religions across Southeast Asia for many things. Buddhist believed that mandalas were a centering device for spiritual purposes. The construction of a Buddhist mandala required artistic training for the creator (Bryant, 2003). Buddhist monks went through years of training to learn how to make the mandala (Thorp, 2017). The monks worked from the center of the circle towards the outside (Thorp, 2017). Participants of Hinduism like Buddhist believed that mandalas were a centering device for spiritual purposes (Dellios, 2003). After the mandala was completed, the monks would destroy it by brushing away the sand and then dumping it into water to return positivity back into the world (Thorp, 2017).

**Native Americans.** Native American tribes created mandalas differently depending on what tribe they were from. The Lakota Sioux tribes used to use the medicine wheel that reflected the four directions that symbolized the strengths and weaknesses of a person (Snyder, 1999). According to Tascioglu and Tascoiglu (2002) the Navajo tribe considered mandalas to be medicine. The Navajo tribes created complex mandala sand art that were a way to connect to their history and identify with the power of the entity it was created after (Tascioglu and Tascoiglu, 2002).

**Mandala use in therapy.**

Art therapists have used mandalas with their clients to empower and to help them find themselves (Wagner, 2012). Coloring and/or creating mandalas were used in mental health field
with many different populations, including posttraumatic stress disorders, dissociative disorders, traumatic grief, and ADHA (Green, Drewes, & Kominski, 2013). Carl Jung was one of the first individuals to use mandalas in therapy due to the calming effect he saw that they had on patients (Henderson, Rosen, & Mascaro, 2007). Jung extensively studied mandalas and found mandalas personally useful at a time in his life when he needed centering (Bair, 2003). Jung viewed a mandala as a template for the mind, a state of peace, order and a resolution of the chaos within (Jung, 2016). Jung (1973) believed that the mandala was a circular drawing representing the self, wholeness of the personality, balance, and desire for harmony. Jung did not interpret the mandalas himself; he believed clients could develop their own conclusions about what their mandala represented (Jung, 1973).

Mandalas were commonly used in art therapy and music therapy. Art therapy was a mental health profession in which the process of making and creating artwork is used to explore feelings, reconcile emotional conflicts, foster self-awareness, manage behavior and addictions, develop social skills, improve reality orientation, reduce anxiety and increase self-esteem (AATA, 2017). Mandalas have been used in many different ways by art therapist (Fincher 2010; Vennet and Serice (2012). Henderson et al. (2007) considered that mandalas had healing properties for clients who use them in art therapy. Music therapy was the clinical and evidence-based use of music interventions to accomplish individualized goals within a therapeutic relationship (American Music Therapy Association, 2017).

**Coloring Mandalas**

Coloring has recently been marketed as a tool for adults to relax (Eaton & Tieber, 2017). According to Muthard and Gilbertson (2016), research has indicated that drawing, coloring, or tracing mandala imagery can reduce an individual’s anxiety and curb intrusive emotions through a means of inducing a meditative state for the individual. However, these results were not
representational of the general population. Coloring pre-drawn pictures and mandalas were effective in reducing anxiety (Curry and Kasser, 2005; Van der Vennet and Serice (2012). Their study examined if participants shared a higher percent of anxiety reduction from coloring a pre-formed design versus a blank sheet of paper (Curry and Kasser, 2005; Van der Vennet and Serice (2012). Curry and Kasser (2005) also discovered that there was no sufficient evidence that supported a greater reduction of anxiety from coloring a preformed mandala versus a piece of paper with a plaid pattern on it. Some believe that coloring is not something that can be used in a therapeutic setting and there is no empirical evidence to suggest that coloring should be used by therapist (Curry & Kasser, 2005; Flett, Lie, Riordan, Conner & Hayne, 2017).

**Summary of Literature Review**

Research on older adults and art was limited. Despite the limited research there were some documented benefits to using art with the older adult population. There were special considerations to take into account when working with older adults including their mental health requirements and physical disabilities including: poor vision, poor hearing, and limited mobility (MHA, 2017). Further research may be beneficial for the older adult population. The knowledge we have about working with older adults is beneficial but there could be more research conducted. Many things can happen to affect the older adult population that mandalas can help with.

There were several factors of this research study that lacked empirical evidence. Research on coloring mandalas with the older adult population was very limited, and so was peer-reviewed research about coloring in general (Eaton & Tieber, 2017). The uses of mandalas were popular and found to help clients center their lives and find a sense of relaxation. In several studies, such as Muthard and Gilbertson (2016), mandalas have been studied for effectiveness in reducing stress amongst college students. It has been reported that mandalas were effective in
stress and anxiety alleviation (Carsley, Heath, & Fajnerova, 2015; Curry & Kasser, 2005; Sandmire, Gorham, Rankin, & Grimm, 2012). The act of coloring has been studied and found to relax clients, and reduce stress and anxiety (Curry & Kasser, 2005; Muthard & Gilbertson, 2016). Mandalas were a popular tool for individuals to use.
CHAPTER III

Methodology

Participants

The participants of this research study were members of a retirement community with locations on the South, East and West sides of a Midwest City. The retirement communities were made up of residents age 55 years and older who can live independently or with limited help through certified nursing assistants. The participants lived at the retirement community and signed up to participate in the study. There were four cites and five participants from each cite, for a total of 20 resident participants. To start the study, the researcher verbally explained the study to the participants and explained that participants could withdraw at any time. The researcher also explained that if they decided not to participate in the study, it would not affect the treatment that they receive at the retirement community. All participants signed a consent form and photography release form.

This study excluded those diagnosed with dementia. The reasoning for the exclusion of this type of participant was due to the location of the study. The communities where the studies were conducted have stipulations regulated by the state and pre-screening processes that exclude people with dementia to live at the residencies. These rules were created to protect the residents of the communities because none of the communities were secure/locked like most nursing homes where a person with dementia might live.

Research Design

The researcher visited each site once. To recruit the participants of the study, the researcher worked with the activities director to create a signup sheet for those who were interested. The activities director made flyers and talked to the other staff to promote the study to increase the number of participants. The study took place in the community
ballrooms located on campus that were easily accessible to all the residents. After an explanation of the study, the participants filled out consent forms first. Then they filled out the pre-stress scale assessment. Participants were then asked to color a pre-drawn mandala. A 12-pack of Crayola colored pencils was provided by the researcher. The colors included black, brown, red, orange, yellow, red orange, yellow green, green, sky blue, blue, violet, and white (Crayola, 2017). The researcher decided to use this particular pack of pencils, because the 12-pack provided what the researcher felt was enough opportunity for variety without being too overwhelming. The researcher selected the Crayola brand because it was one of her favorite brands of supplies. According to the Expressive Therapies Continuum (ETC), colored pencils are considered restrictive and the use is perceptual (Hinz, 2010). The researcher chose a resistive material to color with because she was not looking for an emotional response and the familiarity that most individuals have with the colored pencils. Fluid materials provide an emotional response (Hinz, 2010). The researcher selected the mandala because it had a medium level complexity, where the participants would have to spend time consciously coloring it. The lines of the mandala were bold and well defined for the older adult population as special consideration for those who have trouble seeing.

Research Instruments

**Pre- and post-assessment.** A pre-and post-study assessment (see Appendix A) was administered to gauge self-reported feelings of stress. For both the pre-and-post assessment the study utilized a Likert (1932) scale that allowed the participant to indicate their stress level by circling the number from one to ten with, one representing no stress and ten representing feelings of extreme stress or anxiousness. Many researchers use Likert Scales because they have been found reliable and valid due to the worldly understanding of numbers (UK Essays, 2013). Then
after the participants completed the coloring of the mandala, participants were asked to complete the post-assessment to compare stress levels.

**Pre-drawn mandala.** The researcher found the pre-drawn mandala (see Appendix B) after searching online for one that would work well for the older adult population. The researcher was looking for a mandala that was not too complex but still interesting and that had bold lines. The self-implicated guidelines from the researcher of finding a mandala were influenced after two and a half years of closely working with the older adult population.

**Questionnaire.** Participants also had questionnaires to fill out after coloring the mandalas (see Appendix C). The same questions were given to each participant at each location and were created with validity and reliability in mind. The researcher wrote the questions to be clear and to allow for explanation of the participant answers. The questions were designed to be simple to understand, to the point, and were not leading. Questions on a questionnaire should be objective and should not be overwhelming (Radhakrishna, 2007). To increase the validity of the questions, they were designed with test-retest potential. The U.S. Department of Labor Employment and Training Administration suggested that test-retest potential contributes test validity (1999). The researcher developed five questions from research she reviewed to create this study. The researcher wanted to be direct with the participants and decided that asking what they thought was beneficial was the best question to ask. The researcher also thought it was important to include the questions “why or why not” with some questions, so that the participants would know to elaborate on their answers. The researcher wanted the questions to provide the participants to share their positive and negative responses after taking part in the study. She also included a question about the participant’s feelings because she thought some people might not know how to put what they experienced into words that discuss the benefits of the study. The
final question asked if they would recommend the activity to others in the older adult population to see if they enjoyed the study and thought others would too.

Data Collection

On each participants’ mandala, pre-and post-stress assessments, and questionnaires there was an identifying letter and number corresponding specifically to their building location for anonymity purposes. For example, a participant from the south side property would be given the identifier S1. The researcher had 18 participants to collect data from. The locations of the study were divided up into four letters; N, S, E, and W. The locations had the following number of participants; N had 0, S had 1-5, E had 1-3 and W had 1-10.

Confidentiality is important to make the participant feel that they can answer openly and honestly without being worried about it being connected back to them (Western Institutional Review Board [WIRB], 2017). Anonymity is also how a study can be less harmful for a participant, which was a major concern for the researcher (WIRB, 2017). It was important to have the same labeling for the mandala and the questionnaire so that the researcher could record the data correctly. The researcher collected the three sheets of paper after the participant left the room including; the pre assessment, the colored mandala and the post assessment/questionnaire. Participants were told that they could leave when they had completed their mandala even if someone else was still working or not. The completed mandalas and questionnaires were stored in a closed folder kept in a locked filing cabinet in the researcher’s home. The researcher should be the only one who can access the data collected from the participants to protect the participant’s identities (WIRB, 2017).

Data Analysis

The researcher divided up the assessments into separate folders labeled with the different properties and coded S (South), E (East), and W (West). Each participant was then given a
number to accompany the letter they were already assigned based on their location. The researcher checked the data multiple times by rereading the answers that participants gave, by charting about the participants answers, and by creating a thematic analysis (figure 1). To create the themes the researcher would use different colored pens and markers to match similar words used throughout the locations. After collecting the data and the themes, the researcher made an excel sheet that showed each properties information side by side. The themes include relaxation which was decided on multiple uses or words like; “restful,” “soothing and stress relieving,” “calming,” and “relaxing.” The theme socialization was compiled by words used; “social,” “group activity,” and “enjoyed socializing.”

Quantitative data analysis. The researcher recorded the numbers indicated by the participants using the stress scale from both the pre-and-post assessment. The researcher compared the participants selected numbers to find an average of how many participants were feeling less anxious or stressed after coloring the mandalas.

Qualitative data analysis. The researcher searched for common words or phrases in the participant’s questionnaires. When common words were used the researcher coded it, and recorded the number of times it was used to create a theme (figure 1). The researcher created the code for easier understanding of the data recorded. Fereday & Muir-Cochrane (2006) considered creating a code important and critical to the success of analyzing the data for the researcher. The researcher looked through the data for many hours and many times making it more reliable and to make sure no information was missed. Reexamination of the data is important to make sure details were not missed (Creswell, 2014; Greco, Walop, & McCarthy, 1987). After the data was collected and checked several times the researcher created a thematic analysis of the common themes.
Figure 1. Thematic analysis chart created by the researcher when analyzing the data.

Validity and Reliability

The study was replicated at every location, lending to the data’s validity and reliability. The sample size provided a large number of results that were reviewed and analyzed. Greco et al. (1987) discusses the validity of a reliable study that has been used more than once. By observing the participants, the researcher had a firsthand experience and was able to talk with participants to get a feeling of how the participant is feeling during the study. Creswell (2014) indicated the importance of this interaction with the participants to contribute to a study’s reliability and validity.

Ethical Implications

The ethical considerations of this study were (a) the privacy of the space used, (b) maintaining confidentiality of participants, and (c) that the researcher obtained permission to use data from this activity from the manager of each property and each property’s participating residents. The space where the study was conducted was large and closed off from the rest of the community, but ultimately did not allow for individual privacy when coloring and answering questions. The ballroom was a common space that was accessible to everyone on the property. This researcher had pre-scheduled the ballroom at each campus. The ballroom was the best location for the study to happen because it was an easily accessible onsite location, it was large enough to cater to the unknown amount of participants, and because it could be closed off from the public while participants were coloring.
The researcher wanted to make sure she respected the privacy of the participants as much as she could. Privacy should be used to protect the participant’s identity (WIRB, 2017). By omitting the names of the participants and instead giving each a unique identifier, they would not have to worry about their identities being revealed in the study. The participants of the study were encouraged to express their feelings openly and knew it would be without judgment since no reader would be able to connect an individual with their answers on the questionnaires.

The last ethical implication the researcher considered was that the proper permissions were in order both from the location and the participants (WIRB, 2017). First, the researcher had to get the verbal and written permission from the company’s owner/president. It was the responsibility of the researcher to make sure that the locations property name and space was respected during the study. The researcher was also ethically responsible to fully inform the participant about what they are doing for the study, and that the information gathered would be seen by anyone who reads the study. The researcher put effort into following protocol and making sure the documentation was correct for both the business and the participants’ consent forms (AATA, 2013). The researcher submitted an application to the Saint Mary-of-the-Woods Internal Review Board (IRB) for the study’s approval and approved by the IRB on May 22, 2017. The application included an explanation of the study, examples of the questions the researcher was asking, the mandala that the participants were going to color, and any other information that could prove the study was ethically appropriate and would not cause harm to the participants.

**Researcher Bias**

The researcher had a previous passion for working with the older adult community. Although passion for the subject could be beneficial to a researcher’s work, it also could mean that there was greater hope from the researcher for a study’s outcome to support their theory and
they may not recognize if the study is not successful. The researcher knew some residents at the property personally due to the experience she previously had working at the four locations.

Some of the participants that the researcher knew helped with the study, and they might have answered the questioner in a way that they thought would help the researcher be successful instead of truthful. The researcher also had a belief in art therapy and the therapeutic qualities art has.
CHAPTER IV

Results

The data from this study was collected through observation, a pre-and post-study stress test, and a questionnaire developed by the researcher. The researcher found common themes that the participants considered to be benefits. These themes included (a) relaxation, (b) socialization, (c) enjoyment, (d) creating color combinations, and (e) unique and different.

Relaxation

The researcher anticipated that there would be several participants that mentioned relaxation in their questionnaire. There were many participants from each location that shared they thought that coloring the mandala was relaxing or calming. There was data from every location that indicated participants found that coloring was relaxing. One participant said “coloring mandalas were beneficial because it was calming.” While another reported “coloring a mandala was relaxing.” However, another participant explained the feelings that they experienced while participating in the study were “relaxing.”

The pre-and post-survey included asking the participants to rate their stress from one (being little to no stress) to ten (extremely stressed). Out of the 18 participants, 83% found that coloring the mandala reduced the amount of stress or anxiety that they reported they were experiencing.

Socialization

The researcher anticipated that the participants would enjoy taking part in the study and socializing with each other during it. Although the questionnaire did not mention anything about socialization five participants indicated that they enjoyed coloring because it provided a social opportunity for them. Participants from the East location, although participants sat in a group, did not mention anything positive or negative about coloring with a group. One participant
explained that they enjoyed coloring the mandala and their “favorite part was talking with others.” Another participant explained that they thought coloring a mandala was “a nice group activity and that it was nice socializing with others.”

**Enjoyment**

The researcher found that there were participants at every location that considered coloring enjoyable. Seventy-seven percent of participants reported that they enjoyed coloring. Participants shared that they liked many aspects about the study. The researcher found that most of the participants enjoyed taking part in this study; there were some who did not. There were three participants who found that the mandala that they were asked to color was too complex, hard to see, and that there were too many colors to choose from to color the mandala. The researcher thought it was important to take this into consideration for future studies to make further special considerations.

**Creating Color Combinations**

There were three participants that indicated one of the many reasons they enjoyed coloring the mandalas was due to carefully considering what colors to choose, and what would look good together. The participants shared that picking the colors made it fun to color. The participants said that they “liked” coloring the mandalas, they “enjoyed” participating in the study, and that they thought coloring was a “good” activity for the older adult population to participate in.

**Unique/Different**

The researcher found that many participants, from every location also found that coloring a mandala was something unique and different that they could do apart from their everyday activities. The most common location that people shared their feelings about the uniqueness of coloring was in the last questions, asking if they would recommend this activity for the older
adult population. Two participants described coloring the mandala as “unique” and “different” and that they would both “recommend coloring for the older adult population.”

Summary

Most of the participants of the study found that coloring mandalas was beneficial. The way that participants answered the questionnaire lead the researcher to decide that they thought coloring was relaxing, enjoyable, a good socialization activity, and unique. The results would suggest that coloring would be a successful intervention with the older adult population.
CHAPTER V

Discussion

The older adult population has been living for longer. Art has been used in many different ways for many different reasons, but all with the intention of increasing the quality of life that the older adult is experiencing. This researcher believed that art therapy and artistic practices could be beneficial to the older adult population as they age. Prior to conducting the study, the researcher extensively researched the older adult population, mandalas and coloring. The researcher created this study to identify what the older adult population thought was beneficial about coloring a pre-dawn mandala. The study was conducted at four locations that were residential communities that housed assisted and independent living older adults who were fifty five years and older. The study included a pre-and post-stress assessment, coloring the mandala and a short questionnaire for the participants to answer after the completion of coloring.

During her study the researcher found that coloring mandala’s with the older adult population promoted relaxation, enjoyment and socialization. There were several participants that said they liked or enjoyed coloring the mandalas for many reasons. There are several studies that show that coloring with different populations is a positive experience that helps the participant relax and relive stress (Carsley et al., 2015; Curry & Kasser, 2005; Sandmire et al., 2012).

Relaxation and Stress Reduction

The ETC explains that art can be a relaxing activity that can be used with multiple populations in different ways (Hinz, 2010). Mandalas are a tool used as a form of relaxation. The process in which a mandala is created is similar to organizing the creator’s complex emotional experiences (Henderson et al., 2007). Many art therapists use mandalas for self-awareness, expression and healing (Henderson et al., 2007). Coloring the mandalas showed a
reduction of stress and anxiety for the participants based on the post-coloring questionnaire. The participants also experienced relaxation while coloring their mandalas. These findings were similar to the findings in the study by Curry and Kasser (2005). Curry and Kasser’s study was recreated by Van der Vennet and Serice (2012) and found that coloring mandalas reduced anxiety. In the study that was conducted by Curry and Kasser (2005) there were a large number of participants that saw a change in their anxiety level and decrease of stress when coloring, especially when they colored a mandala. Van der Vennet and Serice (2012) found similar results, in that the people who participated in their study had stress reduction and lowering of anxieties from coloring mandalas. Eaton and Tieber (2017) found that coloring could lessen anxiety and lower negative moods.

Socialization

The older adult population can suffer from loneliness (Noice et al., 2013). Loneliness can often impact the older adult population in a negative way (Wolf & Housley, 2017). Stephenson (2013) discussed that communities are important for the older adult population for many reasons including socialization. Loneliness can be related to depressive symptoms and cause in decline (Wolf & Housley, 2017).

Limitations

There were a few limitations that the research recognized about this study. The researcher only had 18 participants, which could be considered a small sample size and makes the study less valid. The small sample size was due to the study being conducted at only four locations. Another limitation included some participants, who seemed to have trouble answering the questions in detail, and only answered with a yes or no. The participant’s feedback helped the researcher with the data collection and those who answered with yes or no had less input to share. Limitations also included the study excluding those diagnosed with dementia due to the
locations housing guidelines. The researcher also created the questionnaire versus using one that was already used by another study or a standardized assessment. There was also a limitation of researcher bias. While the researcher has worked with other populations, she does enjoy working with the older adult population.

**Recommendations**

The researcher suggests that if the study were to be recreated or altered in any way the sample size should be larger and a more diverse pool of participants should be considered for involvement to increase the validity of the study’s results. The researcher also suggests that there be a choice of mandalas to color that the participants can choose from (ranging in different complexities), instead of just providing one option. The researcher also would suggest that the study take place in different locations besides the four communities the researcher studied. This study could be conducted in adult day care facilities and nursing homes.

In addition, the researcher suggests that this study be conducted with different populations other than the older adult population to explore the benefits of coloring pre-drawn mandalas. Replications or variations of this study could take place in many different places, with different populations with special considerations and variations of the consent forms and research. For example, a replicator could look at how coloring benefits older adults with dementia and Alzheimer’s at an adult day care facility. A researcher could have participants create their own mandalas and study the benefits of creating a mandala with different populations.

**Conclusion**

In conclusion, the researcher found her study to be beneficial to the older adult population and the art therapy community. The research found from this study will help the art therapy community to focus on utilizing art with the older adult population. The study explored
how art could benefit the older adult population, which is an area that lacks research. Data from participants in the study indicated that the benefits of coloring mandalas with the older adult population included relaxation, positive socialization, and enjoyment. The results suggested a need for further research studies around the older adult population and the use of art. This study hopefully sparked the interest of art therapists, to the point of increased focus on art therapy with the older adult population.
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COLORING MANDALAS WITH OLDER ADULTS


Appendix A

Pre-and-Post Study Stress Scale

Please circle how stressed or anxious are you feeling right now on a scale of 1 (no stress at all) to 10 (extremely stressed or anxious)?

1 ___ 2 ___ 3 ___ 4 ___ 5 ___ 6 ___ 7 ___ 8 ___ 9 ___ 10
Appendix B

**Pre-drawn mandala**

The pre-fabricated mandala was printed on an 8.5x11 white sheet of paper. The mandala was not too complex, had bold lines, and was easy to see. The image worked well for the population of older adults because it is not intimidating like other mandalas. It had some layers, but not too many. The mandala was also large, and was not jammed packed with small shapes that might be difficult to see. It had clear bold lines and was easy to see to color in which benefits the older adults who might have trouble with their eyes (Hunter et al., 2017). The participants were handed a piece of white paper with a printed image of a mandala on it. The participants were given a Crayola 12-pack of sharpened colored pencils to color the mandala.
Appendix C

Post Study Questionnaire

Age:____________________

1. How stressed or anxious are you feeling right now on a scale of 1 (no stress at all) to 10 (extremely stressed or anxious)?

   1   2   3   4   5   6   7   8   9   10

2. Did you like coloring the mandala? Why or why not?

   _______________________________________________________________________
   _______________________________________________________________________
   _______________________________________________________________________

3. Did you find coloring the mandala beneficial? Why or why not?

   _______________________________________________________________________
   _______________________________________________________________________
   _______________________________________________________________________

4. Please explain any feelings you experienced while coloring the mandala.

   _______________________________________________________________________
   _______________________________________________________________________
   _______________________________________________________________________
   _______________________________________________________________________

   __________________________________________  __________________________________________
5. Would you recommend this activity with the older adult population? Why or why not?