

Using expressive art in the Form of Mandalas to Reduce Teachers' Stress

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Project Number: S-BEHA-005

Acknowledgements

This research was funded by Dr. Jed Luchow and family, as well as my school.

Note:

This research involved human subjects and was conducted under the supervision of an experienced teacher and followed state and federal regulatory guidance applicable to the humane and ethical conduct of such research. The research was pre-approved by an IRB.

ISEF Sample Abstract & Certification

Using expressive art in the form of mandalas to reduce teachers' stress at Taconic Hills CSD, Craryville, NY

Ali Conway

Taconic Hills High School, Craryville, NY

Teachers experience large amounts of stress daily. Expressive art is commonly used to cope with illness, traumatic experiences, or the stress of daily life. This study asked teachers' at Taconic Hills High School to complete expressive art, in the form of mandalas, to see if it would reduce their stress. Art kits and stress surveys were delivered to the teachers. They were asked to complete a pre and post stress questionnaire and to color in a mandala for 5-10 minutes each time they participated. They were asked to participate 2-3 times per week, but could do as little or as much as they were able to. Expressive art caused an average decrease in stress of 4.01 points ($p < 0.0001$). 87% of the expressive art entrees had a decrease in stress scores. Teachers didn't need to complete extensive amounts of time to achieve this stress decrease. This is important due to the fact that teachers have a very stressful job. Teachers have very limited time in their day to relieve this stress leading to a decrease in their overall health and wellness. Expressive art is a tool for teachers to use to decrease their stress. Not only can this lead to the benefit of the teachers, but also to the students and the school.

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3. I/We worked or used equipment in a regulated research institution or industrial setting.
 - yes no

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6. I/We hereby certify that the abstract and responses to the above statements are correct and properly reflect my/our own work.
 - yes no



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Introduction

Art therapy is a type of therapy used to help people cope with the stressing parts of their life. While art therapy and expressive art are very similar, the difference is that art therapy helps the patient work through their problems and also find the source of them, while expressive art helps someone cope with their problem without finding and solving the problem (H. Hutchison, personal communication, September 30th, 2022). Expressive art can be used to deal with illness, traumatic experiences, or just the stress of life.

Teaching is one of the most stressful professions. Around 46% of teachers in the United States have reported high daily stress. Nurses have reported the same percentage making them both the highest stress rate among all occupations (Greenberg, Brown, & Abenavoli, 2016). Teachers are very stressed throughout the day and they need a way to relieve it. Too much stress can be harmful to physical and psychological health, especially if it is not dealt with. Not only can stress affect teacher health, it can also lead to poor performance and that can affect students as well. High stress is also linked to higher turnover rates (Greenberg, Brown, & Abenavoli, 2016).

Art therapy has been used to reduce healthcare workers' stress. In one study healthcare workers were asked to participate in a zentangle workshop. In this workshop they would spend some time making zentangles then would answer a survey based on their job related to stress. The results of this study suggested that zentangle art could be a way to reduce stress (Hsu et al, 2021). If zentangles, a form of expressive art, can help healthcare workers, then mandalas (another form of expressive art) should be able to help teachers (who, as mentioned previously, have similar levels of stress to nurses) reduce their stress as well.

In this research we will use a pre and post stress survey to determine if teachers' stress is reduced. The stress survey we will use is a scale that has been modified to fit this study. The original scale is the State-Trait Anxiety Inventory for Adults (STAI Form Y-1) developed by Charles D. Spielberger (1977). Although stress and anxiety are different things, they have very similar symptoms so we are using an anxiety scale as a substitute stress scale (American Psychological Association, 2022). Modifying accepted scales to shortened versions is common in psychosociological studies. Our modification is similar to Ming-Pin Lee's development of the BSRS-5 scale by shortening the Symptom Checklist-90-Revised by Derogatis (Hsu et al., 2021). The modification we made to the STAI consisted of shortening it from 20 to 10 questions. Questions kept were representative of the entire sample, and tested different aspects of anxiety. This survey was chosen because it assesses how stressed teachers are at that moment rather than long term stress.

Statement of Purpose

Question: Does expressive art decrease stress in teachers?

Hypothesis: If teachers participate in expressive art, then their stress levels will decrease.

Materials

Each participant received:

- 12 pack of Crayola colored pencils, 1 pack
- 10 pack of Crayola markers, 1 pack
- Black pen, 1
- Pencil, 1
- Stress survey booklet, 5 per participant per week, about 20 for 8 weeks per participant
- Mesh pouch, 1
- Clasp Envelopes, 2
- Mandala booklet, 1

Methods

This study was conducted in my school district. All the participants were educators from the elementary, middle, and high school. Approval was granted by the administration of my school district. In February, 2023, Google Form surveys were sent out to educators asking if they were interested in participating in expressive art for 4 weeks to test if their stress decreases. Consent forms were included, and if participants consented they were asked to complete a demographic questionnaire included in the Google Form (Appendix A). The demographic data consisted of what grade they teach, what they teach, their age, and how long they have been teaching; if they feel uncomfortable answering any of the questions they are not required to do so. Art kits were made and passed out to teachers. The art kits included a booklet filled with mandalas and blank circles (sourced from Sterling Publishing Co., Inc., 2004), colored pencils, markers, black pens, pencils, stress surveys, directions, and an introduction to this study (see Appendix B for the directions and study introduction). There were 24 mandalas, as well as 5 circles (to free-draw a mandala) in the booklet so the teachers had a variety to choose from, if a mandala is not complete they had the opportunity to resume it the next session if they liked. The mandala booklets also contained a variety of different designs and difficulties (Appendix C). The teachers were asked to take ten minutes out of their work day to create or color a mandala in a quiet location of their choice, filling out a stress survey before and after (Appendix D). Each teacher was verbally given the same brief instructions about this study when art kits were initially given to them (Appendix E). When answering the stress survey the teachers picked a number 1-4 (1 being not at all and 4 being very much so) to best describe how they feel based on the question. Before and after stress scores were compared to see if their stress decreased. If the

stress scores were lower after creating or coloring the mandalas that means the teacher's stress decreased. The teachers were asked to complete a survey before the coloring or drawing to act as the control for the post-drawing survey to provide data to see if there is a change. If participants were not able to create or color a mandala the data was not collected for that day. Completed stress surveys were collected and new ones given to teachers once a week. To maintain confidentiality we gave each participant a code that was used in place of their name. The stress surveys were put into an envelope as they were transferred from us to the participants so they were not visible to others. We conducted two trials of this experiment. Each trial lasted 4 weeks with a 2 week gap in between trials. Some participants participated in both trials and some only participated in one trial. After each trial, an exit survey was sent out to the participants (Appendix F). Participants were only asked to fill out the exit survey after they no longer participated in the study.

Results

There were a total of 16 people who participated in this expressive art study. Thirteen of those participants were teachers, 2 were categorized as Other, and 1 more was categorized as Direct Classroom Support (DCS). There was also one additional participant who consented to complete expressive art but chose not to continue after consent was given. Data was only analyzed from the 13 teachers (who together completed 107 expressive art sessions). In the first trial 9 teachers participated. In the second trial 12 teachers participated. Eight teachers from the first trial continued into the second trial. Four additional teachers joined the second trial. The teacher that did not continue into the second trial expressed that they could not manage fitting expressive art into their schedule. Eleven of the teachers were from the highschool while only 2

were from the middle school. Nine teachers were female, 3 were male, and 1 was non-binary. There were 4 science teachers, 1 english teacher, 1 math teacher, and 1 social studies teacher who participated. The remaining 6 participants were put into an "Other" category to keep confidentiality given that there are not as many of those teachers in the school. Five teachers were in the 40-49 age range, 4 teachers were in the 50-60+ age range, 2 teachers were in the 30-39 age range, and 2 were in the 20-29 age range. Seven participants said they already had a way to relieve their stress in a day while 6 said they didn't. Eight teachers had 12+ years of teaching experience, 2 teachers had 4-7 years, and 3 had 0-3 years of experience.

In the first trial, teachers had a mean difference in stress scores of 4.2. The second trial had a mean difference of 3.8. Between the two trials, I had injured myself and thus was unable to directly exchange stress survey packets with the teachers in the second trial. Instead, teachers were asked to put their stress survey packets in their mailboxes in the main office after every week. The packets in their mailboxes would then be replaced with new packets for the next week. While there was a 0.4 difference between the two groups, a t-test returned a p-value of 0.28 showing no significant difference between the two trial groups.

Out of the total of 107 entrees, 2 had worse scores after expressive art, 12 had no change after expressive art, and 93 had a decrease in stress. Overall, 14/107 (13.08%) did not benefit from expressive art, and 93/107 (86.92%) did. The mean of the pre-stress scores was 20.7. The mean of the post-stress scores was 16.69. There was a mean difference of 4.01 from the pre and post stress scores. The T-test between the difference in pre and post stress scores has a $p < 0.0001$ (see Figure 1).

The linear regression of total time spent on mandalas and the difference in stress scores has a p value of 0.55. There is no evidence that there is a relationship between the time spent on creating mandalas and the difference in pre and post stress scores (see Figure 2).

High school teachers had higher pre-stress scores than middle school teachers (mean at 21.06 vs. mean at 18.94 $p=0.05$). Middle school teachers had a lower post stress score than high school teachers (mean at 13.7 vs. mean at 17.3 $p=0.01$). Middle school teachers had a mean stress score difference of 5.22, while high school teachers had one of 3.76. A T-test returned a p value of 0.12 (see Figure 3).

“Years of Teaching” was categorized into four different groups: teachers who have taught 0-3 years, 4-7 years, 8-11 years, and 12+ years. None of the participants had 8-11 years of teaching experience. Teachers who taught 0-3 years had a mean difference in stress score of 2.95. Teachers with 4-7 years teaching had a mean difference in stress scores of 6.69. Teachers who taught 12+ years had a mean difference in stress scores of 3.81. There is a very strong confidence that the groups are different with a $p=0.01$ (see Figure 4). Teachers who had 4-7 years of experience had the highest pre-stress score (23.92), as well as the most decrease in stress.

Teachers that are aged 20-29 had a mean difference in stress scores of 2.46. Teachers between the ages of 30 and 39 had a mean difference in stress scores of 3.7. Forty to forty-nine year old teachers had a mean difference of stress scores of 5.34. Teachers that are 50-60+ had a mean difference of stress scores of 3.52. Teachers 40-49 had the most decrease in stress scores. There is a very strong confidence that the different age groups are different with a $p=0.02$ (see Figure 5).

Observational Results:

School emergency drills were taken into account given that someone may feel stress while those were happening. There was only one lockdown drill during this study. There were two shelters-in-place because of medical emergencies. Three participants completed an expressive art session during the lockdown drill. Only 1 person out of the 3 people reported to be anxious about the lockdown drill. The participant who reported to be anxious was one of two people who had a negative stress score. Out of 107 of the stress score entrees, only 2 had a negative difference in stress scores. No other effects were observed in the teachers' difference in stress scores on the days the shelters-in-place and lockdown drill took place.

Only 12 of the 107 entrees had no change in pre and post stress scores. Six responses had times spent on mandalas over 90 minutes. Emails were sent to those teachers, asking if they were interrupted during those extensive periods of time. They responded with yes. In the open comment section of the stress survey, many teachers commented that they felt tired, disappointed, discombobulated, angry, frustrated, and perplexed. Many reported that their feelings improved after completing an expressive art session.

An exit survey was sent out the day the study ended. Eight participants rated their experience a 4 on a scale of 5 (1 being really bad and 5 being really good). On the same scale, three participants rated their experience a 5, and two rated it a 3. When asked to share their thoughts about their experience, many teachers said they enjoyed coloring the mandalas but they found it hard to find/schedule time in their day to color. When asked if they felt a change in their stress after coloring a mandala, 9 teachers said sometimes and 4 said yes. When asked to elaborate on their answer, most teachers said that they felt calmer, but the coloring felt like a task

rather than a way to relax. Participants were also asked what art supply they enjoyed using the most. Ten participants said they enjoyed using colored pencils the most, 1 said markers, and 2 said "other." Another question in the exit survey asked teachers what they didn't like about the study. Five participants said that there was nothing they didn't like. One reported that they felt the study was too short, and they wished for more guidelines to add to their consistency in participating. Another said that they felt rushed while coloring and sometimes they got stressed from color choices. Three participants said it was hard to make time to participate. Two others said that they would forget to participate, and that made them feel stressed. The final question in the exit survey asked teachers if they would consider using expressive art to cope with stress after this study. Overall, 11 teachers said yes and 2 said no. The ones who said yes, expressed that they are considering the positive effects of coloring. They felt like they could regulate their emotions better, it's a great start to their day, and they think it would also be great for students. The teachers who said no, expressed that they liked coloring better for fun rather than de-stressing.

Discussion

The purpose of this research was to determine if teachers' immediate stress will decrease if they participate in coloring a mandala, a form of expressive art. Expressive art did cause an average of a 4.01 point decrease in teachers' stress scores ($p < 0.0001$). Additionally, 87% of the expressive art sessions resulted in a decrease in stress.

Teachers don't need to do excessive minutes of expressive art to get a decrease in stress. It was suggested teachers spent 5-10 minutes per session, but they could do as little or as much time as they wanted. The linear regression test on the amount of time per session spent and the

difference in stress scores showed a p-value of 0.55, meaning that there is no relationship between time spent and the difference in stress scores. This is a critical finding, as many of the teachers commented that it was hard to find time in their day to participate in expressive art. Our research shows that even a few minutes returned a valuable reduction in stress.

There were some differences found between middle school and high school teachers' stress. Data seemed to suggest that middle school teachers might benefit more from expressive art. Middle school teachers had a difference of stress scores of 5.22 and high school teachers had one of 3.76. It is also worth mentioning that there were only 2 middle school teachers who participated, while 11 high school teachers participated. That being said, more research should be done to see if middle school teachers do benefit from expressive art more than high school teachers.

Teachers who taught in the 4-7 years of experience group had the most stress reduction. The majority of teachers who participated in this study taught 12+ years. Eight out of 13 participants were in this group. They had an average decrease in stress scores of 3.81. The 4-7 years of experience group had 2 people. The average of their difference in stress scores was 6.69. The final group had 3 people, and they have taught for 0-3 years. This group had an average difference in stress scores of 2.95. These differences may be worth exploring more. Teachers who have the most and least experience had less stress reduction than the teachers who have middle level of experience.

There was a difference in methodology between the two trials. In the first trial, I had direct contact with the teachers every week. I would stop by their rooms in person and directly exchange stress survey packets with them. But for the second trial I was injured, unable to

directly exchange stress survey packets with the teachers. While a T-test returned a p-value of 0.28 showing no significant difference between the two trials, a controlled study should be done to see if there is a difference between guided/ supported expressive art and independent expressive art for stress reduction, especially since some teachers reported wanting more guidance with the process.

Another thing to mention is that teachers don't have a lot of time in their day. In the exit survey we sent out, many teachers reported that they didn't like the lack of time they had in their day. Some teachers also reported that they would get busy and forget to color, and some said that this made them feel stressed. It is interesting that even though the teachers said that participating in this study felt more like a task, their stress levels still went down. A future study on this topic could address perceived stress vs. measured stress.

In total, I had 13 participants that produced 107 total data entries. A follow up study should be done to gain a larger sample size, which would provide more data which could demonstrate the benefits of expressive art more. More research should also be done on the different age groups, years of experience, and school that the teachers are teaching (elementary, middle, and high school). There were no teachers who participated from the elementary school, 2 from the middle school, and 11 from the high school. A lot of the other groups also had drastically different numbers of participants. A follow up study with more even grouping numbers would help to determine the true differences between these groups and the impact of expressive art on their relative levels of stress.

Follow up research could also be done for a longer period of time to see how expressive art affects long term stress. This study focused on short term day-to-day stress due its limited

time frame. This study lasted a total of 8 weeks and teachers' stress levels did improve in the present moment of their art completion. It would be interesting to see how much their stress might improve for a whole school year. This could qualify as long-term stress and could benefit their overall quality of life even more.

Conclusion

In conclusion, teachers' immediate stress did decrease when they completed expressive art sessions. Expressive art caused an average decrease in stress of 4.01 points ($p < 0.0001$). 87% of the expressive art entrees had a decrease in stress scores. Teachers didn't need to complete extensive amounts of time to achieve this stress decrease ($p = 0.55$). This is important due to the fact that teachers have a very stressful job. Teachers have very limited time in their day to relieve this stress leading to a decrease in their overall health and wellness. Expressive art is a tool for teachers to use to decrease their stress. Not only can this lead to the benefit of the teachers, but also to the students and the school.

Result Tables

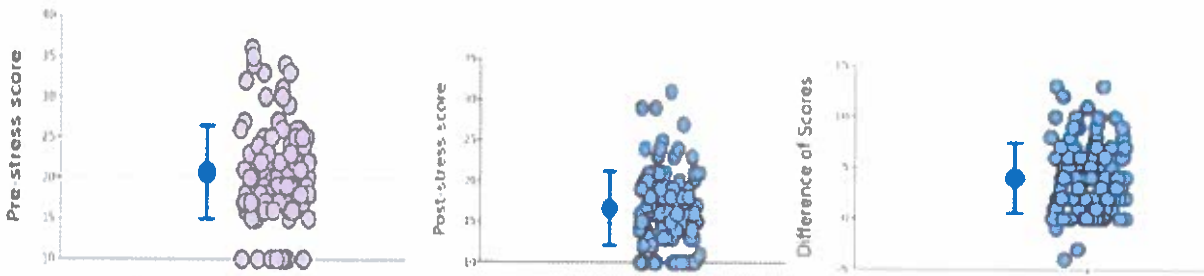


Figure 1: Pre-stress, Post-stress, and Difference of Stress Scores in Teachers

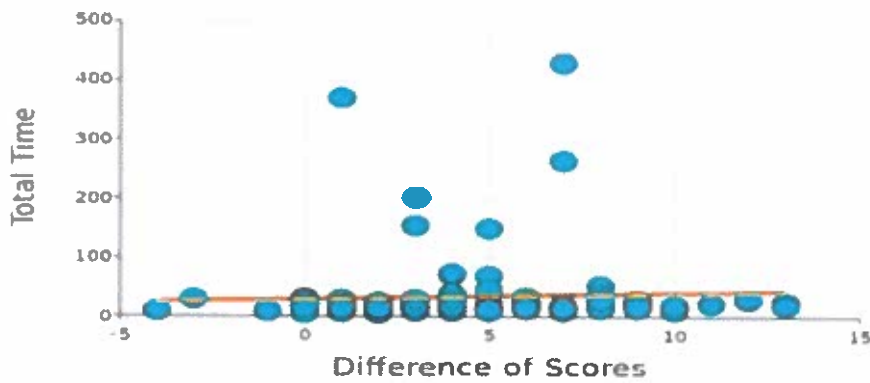


Figure 2: Linear Regression of Total Time Spent on Expressive Art compared to Change in Stress Scores

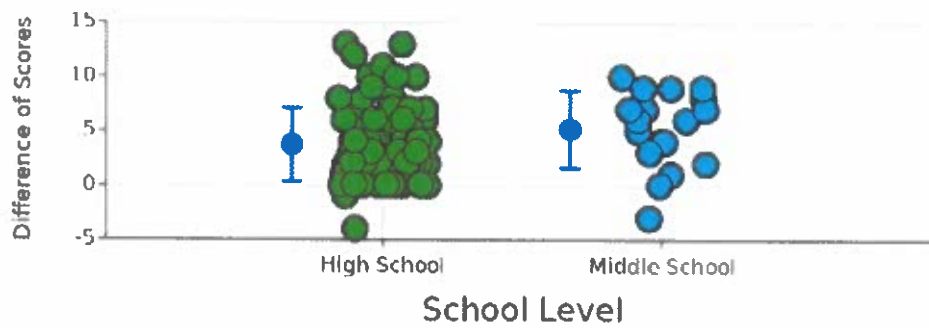


Figure 3: Difference in Stress Scores Between High School and Middle School Teachers

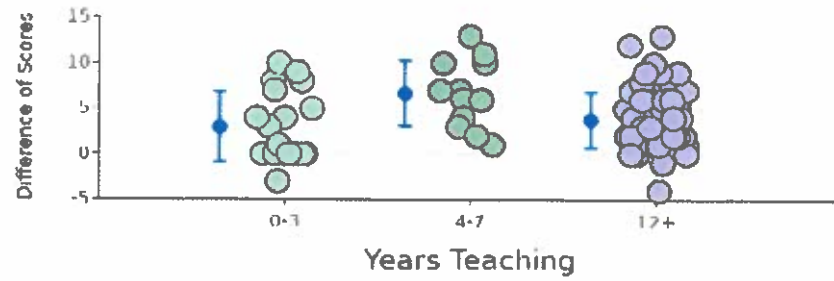


Figure 4: Difference in Stress Scores compared to Years Teaching

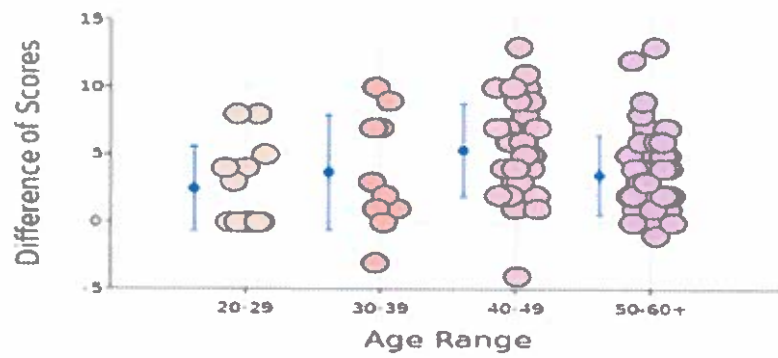


Figure 5: Difference in Stress Scores compared to Age Range

Appendix A- Study Info and Consent/Background Survey

Research Project Information (if you participate, you will be given a paper copy for your records)

Student Researcher: Alexandria Conway

Title of Project: Expressive Art as a way to relieve teachers' stress.

I am asking for your voluntary participation in my science research project. Please read the following information about the project. If you would like to participate, please sign in the appropriate area below.

Purpose of the project: To determine if expressive art could be used as a way to relieve stress in teachers.

If you participate, you will be asked to: Take part in coloring mandalas for about 10 minutes each school day for 4 weeks. Each time you color a mandala you will be asked to fill out a before and after survey based on your stress that will be collected every week. I ask that you commit to completing a mandala and stress survey at least 2 times a week. Demographic information will also be collected.

Potential Risks of Study: Risks are minimal, some people may experience strong emotions while doing art.

Potential Benefits of Study: Practice stress reducing skills, may reduce stress.

How confidentiality will be maintained: Personal information will only be analyzed by the researcher (myself), the advisor, and the science research teacher. Identities and personal information will not be published or used; they will be replaced with codes.

If you have any questions about this study, feel free to contact my Research Advisor:

Name: Linda Hopkins

Title: Science Research Course Instructor

Phone: 518-325-2800 x 2510

Email: lhopkins@taconichills.k12.ny.us

Consent

Voluntary Participation: Participation in this study is completely voluntary. If you decide not to participate there will not be any negative consequences. Please be aware that if you decide to participate, you may stop participating at any time and you may decide not to answer any specific questions.

Consent: If you agree to participate, please type your name below:

I consent to participate in this study

Background Survey

A confidential survey that will be used to collect some background information.

1. What is your name? *

2. What is your room number? *

3. What is your role? *

Mark only one oval.

Teacher

TA

Guidance/counseling

Administration

4. What school level do you teach? (If you teach multiple grades then what kind of teacher do you consider yourself?)

Mark only one oval.

Elementary School

Middle School

High School

5. How many years have you been teaching?

6. How old are you?

7. If you teach a specific subject, what subject do you primarily teach?

8. Do you consider odd or even day more stressful?

Mark only one oval.

Odd

Even

They are both about the same

My days don't alternate

9. Gender?

Mark only one oval.

- Male
- Female
- Non-Binary
- Prefer not to answer

Thank you for participating I will be stopping by your room in the next two weeks to give you supplies and help you get started with expressive art for stress relief.

What time on **odd** days are best for me to stop by your room? Pick as many times ***** that apply.

Check all that apply.

- between 9:35 and 10:15
- between 11:00 and 11:35
- between 12:25 and 1:05
- none

What time on **even** days are best for me to stop by your room? Pick as many that ***** apply

Check all that apply.

- between 11:00 and 11:35
- between 1:05 and 2:05
- none

If you are not available during any of these times please put a time you are available and whether it is an odd or even day below.

Appendix B- Study Introduction and Directions (included in art packet)**Expressive Art Study**

First things first, thank you for agreeing to take part in this study! Also I would like to say that you are not obligated to participate every single day of these next 4 weeks. It would be great if you could participate as many days as possible but I am not expecting you will participate every day. This study is meant to reduce stress NOT create more stress. I would also like to mention that you will be given a code that will be used as your name. The code will be on all your papers that will be exchanged from me to you to maintain confidentiality. The only people who will know who you are based on your code will be Ms. Hopkins and I.

Things to keep in mind**About the Surveys-**

The pre and post stress surveys will contain questions about your stress in the moment you are taking the survey. The scores of each one will be compared to one another to see if expressive art (mandalas) did reduce your stress. In order for this to work best you must not look at your pre test before you have taken the post test.

About the mandala booklets and art supplies-

You will be given a booklet as well as some art supplies. You can use the art supplies in any way you would like to color the mandala. I would also like to add that you do not have to finish a mandala every session. If you do not finish a mandala you can work on it again during another session or start a new one. Just make sure that every time you start another session you do a new pre and post stress survey.

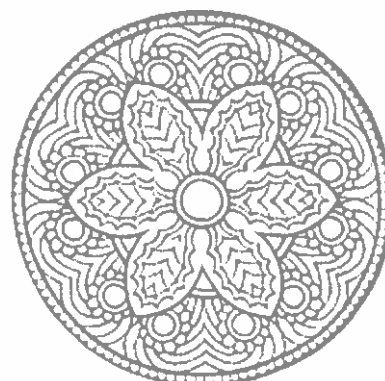
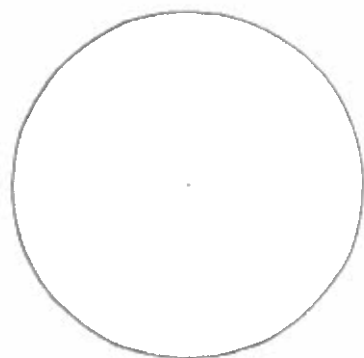
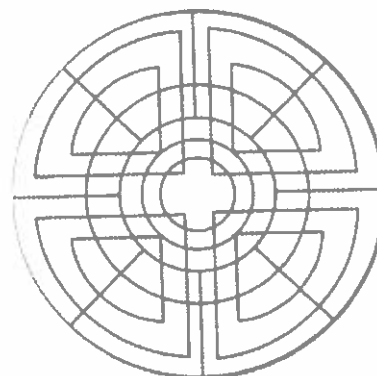
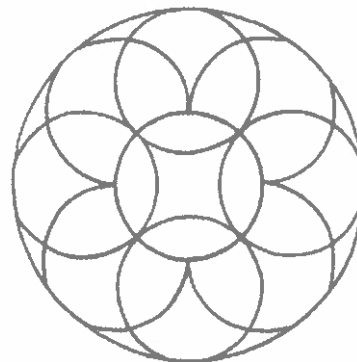
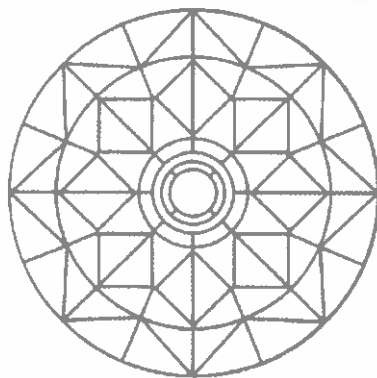
Directions

- 1) To start a session, the first thing I would like you to do is take out a pre-stress survey.
- 2) Once you have filled out the pre-stress survey I would like you to pick out a mandala from your booklet and take out the art supplies you would like to use.
- 3) Now that you are ready to start, take note of what time you started and write it down on the pre-stress survey on the time spot. I recommend you color for at least 10 minutes but you can color for as long as you would like.
- 4) When you are done coloring, I would like you to take note of the time again and record the amount of minutes on the post side of your stress survey. Fill out the post-stress survey. Once you have finished the post-stress survey you are done. You can put everything away and continue on with your day.

I would also like you to keep in mind that I will be stopping by your classroom every Monday to collect your surveys from that week as well as give you new ones. The times I will be stopping by will be different depending on if it is an odd or even day.

Appendix C- Mandala Booklet

Examples of Mandalas included in Mandala booklet,
actual Mandalas fill the size of an 8.5" x 11" page.



Appendix D- Expressive Art Pre and Post Stress Surveys

AFTER Art - Stress Survey

Time _____

Directions

A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you feel **right now, that is, at this moment**. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

Key:

1- Not at all 2- Somewhat 3- Moderately So 4- Very Much So

- 1 I feel calm..... 1 2 3 4
- 2 I am tense..... 1 2 3 4
- 3 I feel at ease..... 1 2 3 4
- 4 I feel upset..... 1 2 3 4
- 5 I feel nervous..... 1 2 3 4
- 6 I am jittery..... 1 2 3 4
- 7 I am relaxed..... 1 2 3 4
- 8 I am content..... 1 2 3 4
- 9 I am worried..... 1 2 3 4
- 10 I feel pleasant..... 1 2 3 4

Is there another option you have been feeling today that is not on this list? If so, what is it and what would you rate it using the numbers 1-4?

_____ 1 2 3 4

BEFORE Art - Stress Survey

Code _____ Date _____ StartTime _____

Directions

A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you feel **right now, that is, at this moment**. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

Key:

1- Not at all 2- Somewhat 3- Moderately So 4- Very Much So

- 1 I feel calm..... 1 2 3 4
- 2 I am tense..... 1 2 3 4
- 3 I feel at ease..... 1 2 3 4
- 4 I feel upset..... 1 2 3 4
- 5 I feel nervous..... 1 2 3 4
- 6 I am jittery..... 1 2 3 4
- 7 I am relaxed..... 1 2 3 4
- 8 I am content..... 1 2 3 4
- 9 I am worried..... 1 2 3 4
- 10 I feel pleasant..... 1 2 3 4

Is there another option you have been feeling today that is not on this list? If so, what is it and what would you rate it using the numbers 1-4?

_____ 1 2 3 4

Appendix E- Script for dropping off art kits

Script

NOTE- Bring a separate stress survey/mandala booklet for a visual

- ★ Hello my name is Ali Conway, thank you for agreeing to participate in my study!
- ★ Here is your art kit, it includes everything you will need to participate.
 - *List off what kit includes...*
 - Pack of colored pencils
 - Pack of markers
 - Black pen
 - Pencil
 - Mandala Booklet
 - Stress surveys
- ★ The Mandala Booklets have 24 mandalas inside and 5 blank circles
 - Inside the booklet there are 12 simple mandalas and 12 complex mandalas, you can choose from any of them, or you can make your own in the blank circles
- ★ During your work day I would like you to take about ten minutes out of your day (you can do more or less) to participate
 - Once you are ready to start a session I would like you to take a pre stress survey, after that you can color then take a post stress survey
 - To take a survey you would...
 - Take survey paper out of envelope
 - Fill out the time you are taking the survey and your code
 - Read each question carefully and answer using the 4 number system
 - After the questions are completed feel free to use the space at the bottom to say anything else that you would like to add
 - Repeat steps after coloring mandala for the post survey

- If you do not complete a mandala during a session then you can continue working on it during a later session if you would like or you can start a new one, just before you color anything fill out the pre and post stress surveys

- ★ Once a week (on a Monday or a Friday) I will be stopping by your room to pick up your stress surveys for the week and give you new surveys. *(verify time submitted on google docs if necessary)*

- ★ You can participate for as many days a week as you would like but I would recommend 2-3 times a week, if you would like to stop participating at anytime you can let me know (email me or tell me in person)

- ★ If you have any questions or concerns you can also email me and I will do my best to get back to you as soon as possible
 - Here is a copy of the Project Information sheet
 - My email and Mrs. Hopkins' email is on it if you need them

Appendix F- Exit Survey

How would you rate your experience during this study? *

	1	2	3	4	5	
Really Bad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Really Good

If you wouldn't mind, please share your thoughts about your experience. (optional)

Your answer

Did you feel a difference in your stress levels while doing expressive art? *

- Yes
- No
- Sometimes
- Other:

Please elaborate on your answer above.

Your answer

What art supplies did you enjoy using the most? *

Your answer

Is there anything that you didn't like about your time while participating? Please elaborate.

Your answer

Would you ever consider using coloring as a way to cope with stress after this study? (Please elaborate.)

Your answer

Thank you so much for participating in this study! I hope all of you have amazing stress-free days!

Literature Cited

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