

## **Mandala Art Therapy: Intervention for Individual With Autism Spectrum Disorder (ASD)**

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This study was done to investigate the effectiveness of Mandala Art Therapy (MAT) as a tool to enhance the Social Interaction Skills (SIS) of a student with Autism Spectrum Disorder (ASD). The participant of this study was a student with ASD aged twenty-three years old attending a special development center. There were six sessions of MAT done in this study. The initial score and the after score of participants' Autism-Spectrum Quotient (AQ) assessment were compared to determine whether there is an improvement of his SIS after going through six sessions of MAT. Besides that, the participant's behavioral changes and color application from his mandala throughout the six sessions of MAT were also observed and analyzed to explore the improvement of his SIS. After six sessions of observation, the findings obtained from the MAT sessions indicated that MAT is useful to improve the SIS of the participant in this study. This study showed that MAT could be utilized as a useful tool in therapy sessions for other students with ASD to improve their SIS.

*Keywords:* Autism Spectrum Disorder (ASD); Mandala Art Therapy (MAT); Social Interaction Skills (SIS); color analysis; Autism-Spectrum Quotient (AQ)

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder where individuals on the spectrum experience significant difficulties in communication, social interaction as well as restricted interests and behaviors (Bernard, Enayati, Redwood, Roger, & Binstock, 2001; Capps, Yirmiya, & Sigman, 1992; Wing, 1969). Three major symptoms were identified in almost all individuals diagnosed as suffering from ASD (Rutter, 1978; Rutter, Greenfeld, & Lockyer, 1967). Lack of social skills, impaired verbal skills, and compulsive disorder are three major symptoms among the many symptoms of ASD (Robins, Fein, Barton, & Green, 2001). The symptom found in every single individual varies from severe to mild forms of autism. Although every person is diagnosed with the same inventory, each on the spectrum is unique with his or her behaviors and characteristics.

Overall statistics around the globe reveals that ASD documents a rapid increase in numbers throughout the year. Centers for Disease Control's Autism and Developmental Disabilities Monitoring (ADDM) based in the United States records the most comprehensive study done up to the present time (Ting, Neik, & Lee, 2014). In 2006, ADDM recorded that ASD occurs 1 out of 110 children in the United States. However, the statistics have increased in 2008 where 1 in 88 children with ASD was diagnosed. The rate continues to increase in 2014 to 1 in 68 children, and in 2016 the number remains unchanged. In England, the National Health Service (NHS) estimated that there are about 0.1 percent of increase in the prevalence of ASD from 2007 to 2011, in which there are approximately 450,000 of ASD adults in 2011.

In Malaysia, certified documentation of autism prevalence is not available as reliable evidence (See, 2012). The reason for the absence of certified documentation is because ASD is classified as a subordinate along with other cognitive and developmental disabilities under the category of learning disabilities (The Ministry of Education Malaysia, 2012). The National Autism Society of Malaysia revealed that there is an increase of up to 30% students in the organization from 2010 to 2013 (Cheong, 2009). Although there have been countless studies in the ASD's manners of causation, the absolute cure has yet to be found. As the statistics of ASD is rapidly increasing, the effective intervention and treatment for individuals with ASD are a necessity to improve the condition of their life. It has been recommended that the inclusion of art therapy to the multidisciplinary therapeutic methods for individuals with ASD has brought a favorable result for them (Malchiodi, 2003).

### **Art Therapy**

Art therapy can be incorporated as an effective intervention to improve the quality of individuals with ASD (Malchiodi, 2008). A variety of frameworks that is appropriate for the population of ASD have been proven beneficial with the combination of development, cognitive and behavioral approach (Leitch, 2008). Individuals with ASD can learn to develop by growing from one stage of drawing to the next level. The opportunity of development and creating art can alternatively act as a mode of communication (Evans & Dubowski, 2001). Malchiodi (2003) observed that behavior development techniques to individuals with ASD showed positive improvements to the language, social limitations, and behaviors linked to individuals with ASD.

There are numerous studies done to investigate the effectiveness of art therapy to different groups of individuals. Elkis-Abuhoff (2008) implemented art therapy to an eighteen-year-old female student with a high-functioning ASD. The study focused on helping the participant on her difficulties to socialize with other students in her school. Initially, the participant was instructed to make a collage that represents the image of her. The final result of the collage she created showed that she did not create any human figures. The result showed her social isolation in school and her inclination for non-social settings. The next activity given to the participant was an "expression collage" where she was asked to look for pictures that symbolize facial expressions that she could think of. The instruction was intended for her to be familiar with various facial expression of human. As the therapy continued and reached to the end, the participant showed an improved perspective on socializing with other students in her school. When the therapist repeated the first activity to make a collage that represents her, she made a different choice from the first collage as she included many human figures in the collage. The participant described a gain of confidence to make friends after going through the art therapy sessions.

Smitheman-Brown and Church (1996) conducted a study that involved children with ADHD. The focus of this study was to determine the changes in the children's behavior and creative growth when a mandala-drawing session is implemented. For every session conducted, mandala therapy was introduced at the beginning period of the course. The reason for beginning each session with mandalas was to determine and observe if their attention span elevates and impulsive behaviors reduce. The result of the study showed that mandala drawing as an initial activity during every session brought the effect to increase their attention; helps children with ADHD to improve decision-making

activities, and aids in the growth to express without constraint on their interests. Inattention is a similar feature of ADHD and ASD; therefore it is relevant to practice art therapy exercise for individuals with ASD.

Tiang and Ting (2009) utilized art therapy in their study to a ten-year-old child with anger issue to investigate whether art therapy could help to find out the cause of anger of the participant. On every art therapy sessions, the participant was asked to draw the situation she went through in her classroom that caused her to become angry. Before drawing activity started, the therapists made conversations with the participants to discuss the drawings she made on the previous session. After seven sessions of art therapy, the child was asked to observe and figure out similar images among seven drawings she created. She was able to figure out that the representation of anger towards her classmates without a cause was present in all seven drawings. The participant managed to realize the cause of her angry behavior and thus helped her to sort out her emotions. The results showed that the art therapy applied on the participant was helpful in recognizing the issues and solution of the participant's anger management.

### **Mandala Art Therapy**

The employment of mandala as an art therapy technique can be an effective tool for individuals with ASD. Mandala is a Sanskrit term that brings the definition of "the sacred round" (Buchalter, 2012; Ratcliffe, 1992). The mandala can be found across cultures around the world where their perspectives and beliefs are expressed. In the Eastern culture, *yin* and *yang* are a circular design comprised of two halves with black and white division (Fang, 2012). A concept used within Taoism, the contrast section of the circular design signifies the opposing forces that indeed brings a

complimentary and harmonious nature of the world (Fodor, 1991).

On the other hand, Tibetan Buddhists create sand mandala as one of their rituals for meditation, where mandalas are believed to symbolize perfect balance and harmony (Snook, 2009). Circular designs found in the Aztec Empire, where the circular designs were used as calendars called the Sun Stone. Animal symbolism is depicted to represent a different era of the empire (Price, 1996). The architectures of Christians and Muslims found in the shape of a rotunda; where both churches and mosques are built with circular buildings and dome as its rooftop. Wheel windows of Christian Gothic architecture comprise of circular patterns while circular Arabic alphabet decorates glass domes of the mosque. Both aesthetic attractions of the circular decorations attract human to focus on the center, which conveys as a tool of contemplation with God (Cousins, 1971).

Carl G. Jung, the father of analytical psychology, discovered that mandala has the capability to track products of our unconscious mind (Donlevy, 1996). He believed that the activity to record our unconscious mind would help to heal the psyche state of an individual (Jung, 1965; Slegelis, 1987). The symbols and shapes recorded in mandala are archetypes that represent the center of an individual's identity. Jung regarded the archetypes as originating from the dreams and visions of human from every culture in the world (Gaines, 1994). The principal objective of using mandala for meditation is to disclose the conscious layers that conceal the unconscious mind to investigate the hidden problems that reside in an individual (Pennachio, 1992).

The creation of mandala brings numerous benefits where the main goal is to gain integration of the conscious and unconscious minds. While creating a mandala, clients concurrently create a

personal boundary that separates them from their space and the external world (Smitheman-Brown & Church, 1995). It gives a secure setting where the unconscious mind will spontaneously be displayed through the symbols created. The process of mandala art therapy becomes enjoyable as a meditational tool as they possess a comfortable instrument to find their inner self (Babouchkina & Robbins, 2015). Mandala has been proven to be a rejuvenation tool as positive energy is exercised as creators choose symbols, colors, and shapes to create a mandala. The process of creating mandala itself offers a channel to eliminate negative energy while positive energy is retained (Hwang, 2011).

### **Susanne F. Fincher's Interpretation of Colors in Mandala**

The mechanism of the meaning of colors in a mandala was explained in a thorough approach by a Jungian psychotherapist, Susanne Fincher in her book, *Creating Mandalas: For Insight, Healing, and Self-Expression* (Fincher & Johnson, 1991). Fincher embraces herself on the exploration of Tibetan Buddhism knowledge and the Jungian psychology, making her known internationally for the exploration of mandalas (Ratcliffe, 1992). According to Fincher, the usage of colors in a mandala is necessary to make the exploration of self-wholeness complete (Zammit, 2001). The investigation to find the message behind colors used will help to understand more about subconscious thought. Fincher pinpointed the meaning behind the choice of main colors and colors of choice applied in the center of the mandala as a representation of the hidden thought of a person (O'Donnell-Allen, 2005).

Before Fincher's devotion in the study of the mandala, she faced the turmoil of her life when she went through a divorce and the loss of a child in 1976. These two conflicts brought upon great misery to her life that resulted in the withdrawal of

sharing her emotion with others. During this period, she found a sensation of healing whenever she made free drawings every day; circular designs are found to be more soothing according to her. She discovered that art practiced in psychology as a healing tool by art therapists (Fincher & Johnson, 1991). This discovery motivated her to engage in training to become a registered art therapist. Throughout the time as an art therapist, she came across the work of Joan Kellogg, an art therapist who utilizes circular drawings as a guide to explore the characteristics of the people who drew them. Joan Kellogg made her theory in the foundation of the work of Carl Jung, who mentioned creative drawings as "mandalas." Fincher indulged with the initial study of the mandala with the guide from Joan Kellogg and started including mandalas in her art therapy sessions.

### **Research Question**

The question that has been addressed in this study is: *"Do six sessions of MAT help an adult with ASD to improve SIS based on the mandala coloring activity and performance score of the AQ Assessment?"* The subjective and objective methods of data collection that will be explained in the method section will be implemented to determine whether there is an improvement of SIS after going through six sessions of MAT.

### **Method**

#### **Research Design**

This study is an exploratory case study where the focus is to determine whether MAT helps to improve the SIS of a student with ASD during six sessions of MAT. Objective and subjective methods of analysis were employed. Exploratory studies of therapeutic change commonly opt to utilize both objective and subjective method of measure into a thorough analysis

(Llewelyn & Hardy, 2001). The combination of objective and subjective analysis can potentially provide more comprehensive description from the therapist's outlook into the development of change (Boston & Lush, 1994). The subjective analysis of this study is a qualitative analysis describing the changes of the participant over the six MAT sessions. The researcher watched the video recordings after each session ended and transcribed extensive notes of the participant's behavior, minimizing personal interpretation as possible.

For the objective analysis, three categories of the participant's behavior and activities in therapy were selected. These categories are the initial choice of colours, dominant colours, and placement of the first color in the participant's mandala. Besides that, the initial and after score of the AQ score was also collected from the questionnaires to determine whether there is an improvement of their SIS after going through six sessions of MAT.

### **Role of the Researcher**

The researcher plays the role as a passive observer in this study. While the participant is coloring the mandala, the researcher stood next to him with a distance to gather data without disturbing him. Although the researcher tried to not disturb the participant, conversations were initiated when he is facing difficulties to encourage him to continue to work on his mandala. Conversations were also occurred when the participant approached the researcher first. Therefore, to reduce the bias that may happen during the conversation, as the researcher was also playing a role as a therapist, a research assistant was present to make observation of the participant's behavior and make records through an electronic worksheet. Video recording were also a tool for the researcher to view after each session to make detailed notes of the participant's behavior.

### **Participant**

The participant was referred to the researcher based on references from the principal of the special development center. The following criteria was adhered to choose the participant: (i) twelve years or older; (ii) diagnosed with autism spectrum disorder; (iii) have difficulties to communicate and employ social skills; (iv) able to handle coloring materials; (v) received consent from parents or guardian to participate in the study.

AZ (pseudonym) is a 23-year-old senior student in a special development center in Sabah that works with students with ASD and other developmental disabilities. AZ attended special education curriculum in a public school since he was 7 years old and completed the special education curriculum when he was 17 years old. Since then, he has been attending the particular development center for approximately six years. AZ scored 35 out of 50 on the Autism-spectrum Quotient (AQ). If an individual score equivalent or more than 32 out of 50 on the AQ, it is highly predictive of ASD. The AQ are made up of questions from five different areas: social skill, attention switching, attention to detail, communication, and imagination. AZ scored most points in the area of communication, where the score indicates that he has a poor communication skill. According to the scored AQ of AZ, it indicated that he does not know how to keep a conversation going, has no sense of when it is his turn to speak, and frequently repeats the same topic when he is speaking. AZ scored the second highest in the area that indicates poor attention to detail while the area of social skill, attention switching, and imagination scored the same amount of points simultaneously.

### **Procedures**

When AZ's parents had given their informed consent, the researcher came to

the institute and gave the two teachers who are responsible for AZ the Autism-Spectrum Quotient (AQ) to assess AZ's score of autistic traits. The score of the AQ assessment of AZ is crucial as an initial data for this study. The AQ is a questionnaire to investigate the rate of autistic symptoms in adult and children. The study was conducted over a six-week period with one session per week. The duration of each session is one hour. During every session, the researcher observed AZ in an environment that is natural for him. A classroom in the special development center was used during all six sessions of MAT. AZ was given a paper with pre-drawn mandala during each session. The researcher observed the behavior of AZ and his engagement with the mandala. A research assistant was present during every six sessions of MAT to assist with the video recording and observation of AZ during coloring activity.

### Data Collection

Data collected during every session are the choice of colors that AZ applied in the pre-drawn mandala given. The initial choice of colours, dominant colours, and placement of the first color was analyzed. AZ was also evaluated through the AQ

assessment for his autistic traits. Two teachers who are in charge of the AZ were given the questionnaires before the first session and after the sixth session. The initial and after score collected from the questionnaires were compared to determine whether there is an improvement of his SIS after going through six sessions of MAT. The changes of the five domains in the questionnaire for AZ were analyzed after MAT sessions were completed.

### Materials

For every session, a pre-drawn mandala was given to AZ during every session for six weeks. A variety of mandala designs were provided to help AZ develop from one stage of drawing to the next level. A simple design was given in the first week, while the intermediate difficulty of mandala designs was given starting from the second week until the fourth week. Mandalas with more complicated designs are given out from the fifth to sixth week. Mandalas provided are printed on A4-sized papers for the ease of documentation. Colored pencils with 36 different colors were given as coloring materials as the participant are familiar with the usage of pencils – no experience is needed to control this medium.

Table 1

*One mandala for each session in 6 weeks*

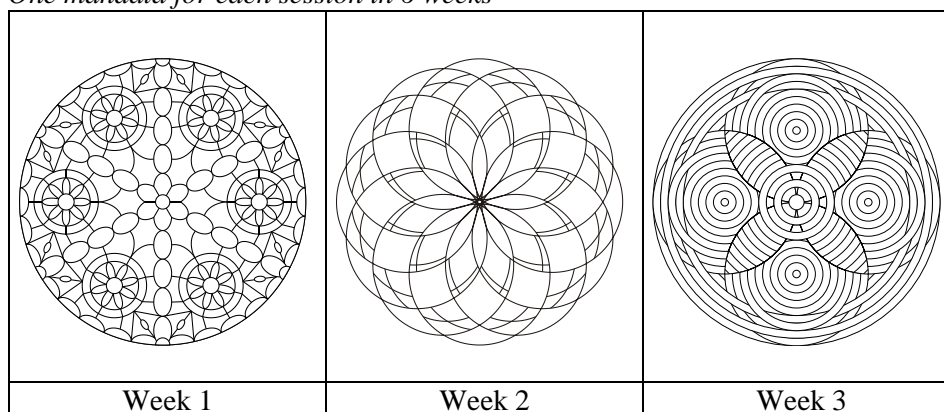
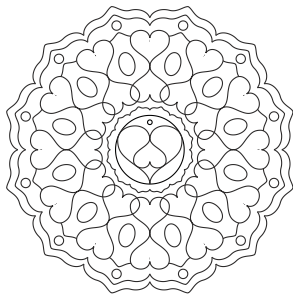
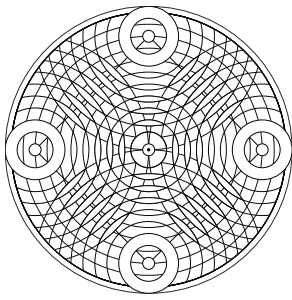
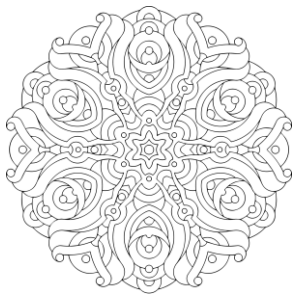


Table 1 (cont'd)

		
Week 4	Week 5	Week 6

**Results and Discussions**

From the beginning of the first MAT session, AZ refused to have any conversation with the researcher. AZ was deliberately ignoring the presence of the researcher and turned his head away when the researcher tried to approach him. He showed expressions of anxiety by demonstrating self-stimulatory behavior of face twitch for five minutes. However, there were few moments of pause between

his face twitch behaviors when he started to color the mandala sheet. Throughout the first session, AZ did not indicate signs of SIS, as he felt very unfamiliar and defensive toward the researcher. He held a green color pencil on his left hand from the beginning to the end of the session. This behavior may indicate his way to cope with the anxiety caused by the new environment of MAT session.

Week 1

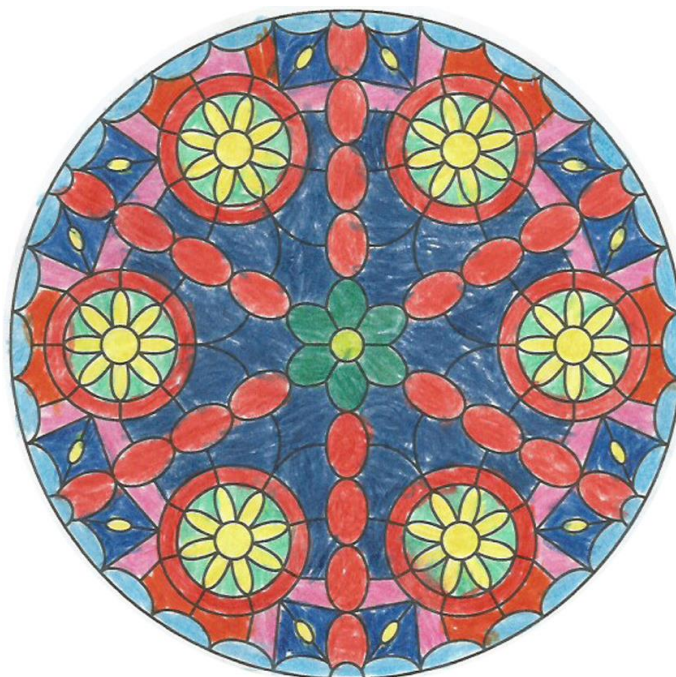


Figure 1: AZ's mandala for Week 1

## Week 2



*Figure 2: AZ's mandala for Week 2*

During the second session, although AZ continued to feel insecure towards the researcher, he did not refuse to color the mandala sheet given to him. AZ started applying colours at the flower-shaped object at the center of the mandala with yellow color. He applied dark blue to the section that surrounds the yellow flower. A majority of space surrounding the yellow flower and blue is filled with grey. A small amount of red color applied to the mandala created an entirely different atmosphere to the mandala. AZ showed the impression of insecurity when applying brown color to the area close to the edge of the mandala, as he was still feeling uncomfortable towards the researcher on the second session. Black color that surrounds the mandala depicted an urge to conceal him to the external situation.

AZ placed colours to the mandala design in a rigid and uniformly manner, where colours were placed from one layer to another layer of the mandala design, either from the center or the edge of the mandala designs. The teacher from the special development center suggested to AZ to try placing the colours in a different manner without following a uniform sequence. However, AZ does not seem to be happy with the teacher's suggestion. He paused for a while and demonstrated self-stimulatory behavior through his facial twitch. He took his time to stare blankly into space for five minutes and continued to color. He disregards the teacher's advice and proceeds to color in a uniform sequence. This behavior corresponds well with his teacher's description of him that he sometimes may get too absorbed with a specific order that he will disregard anything else.



## Week 3



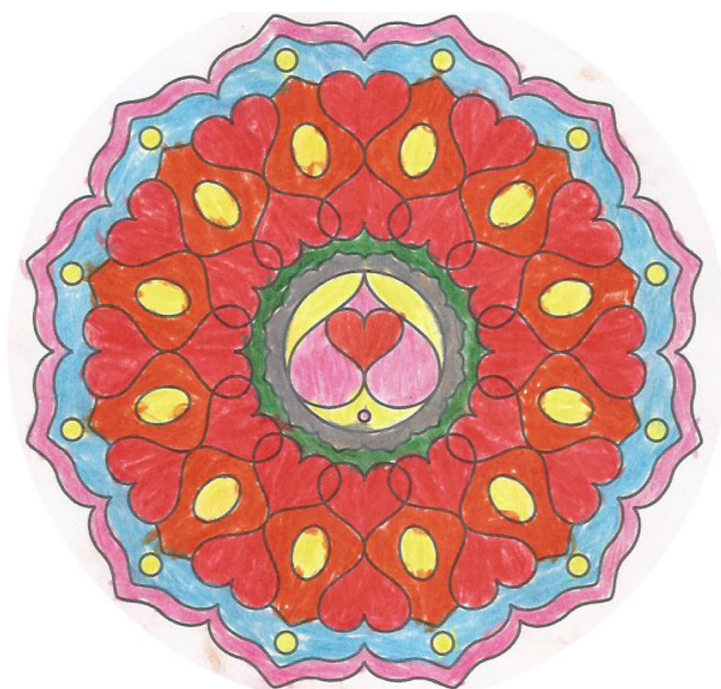
Figure 3: AZ's mandala for Week 3

AZ showed uncertainty to start coloring the mandala during the third session. In the first five minutes of the session, he stared into space and looked around the environment of the classroom. Despite the moment of hesitation, he still showed the will to pick a color. He finally chose an intense shade of orange color and applied it to the outermost layer of the mandala. After having another ten minutes of hesitation, he chose black as the second choice of color. The red color was paired side-by-side with black color previously colored. AZ took another five minutes to stare into space before he resumed his work. He picked yellow and blue this time and applied the two chosen colours alternatively to the four-leaf shape in the middle of the mandala. AZ made a sudden change of

mind for color in the middle area of the mandala. Instead of alternating yellow alongside with blue color, he exchanged yellow with pink color.

AZ's teacher from the previous session made a second attempt to suggest AZ to change his pattern of color placement instead of a uniform pattern. However, AZ resisted with the suggestion. After receiving the suggestion from the teacher, AZ hesitated to continue coloring the mandala. The researcher approached AZ and said he is free to apply the colours in any way that he desired. The researcher asked what color AZ wanted to pick to encourage him to continue coloring the mandala. During that time, AZ seemed to be less defensive to the researcher.

## Week 4



*Figure 4: AZ's mandala for Week 4*

AZ started the fourth session with a positive expression when he saw that the mandala given today is filled with heart patterns. He began coloring the first heart shape in the middle of the mandala with red color. His association with red color and heart shapes indicates that he is capable of executing logical reasoning choice. His initiation to start at the center showed that he is comfortable and possess self-assertion to his decision. Next, AZ applied yellow color to the oval shape that encircled the mandala. AZ's choice of blue and pink at the edge of the mandala contributed to the harmonious mood and a good color balance to the mandala.

AZ showed a positive response to the researcher's attempt to interact with him during the fourth session. When AZ came to the classroom, the researcher greeted him

cheerfully and asked him to pick one mandala from six choices of mandalas provided for this session. AZ did not try to ignore the researcher and went near towards the researcher to pick a mandala. After looking through to all six mandalas at once, he immediately chose the mandalas with heart shapes. After he finished filling red and pink color to the heart shape in the center of the mandala, he showed a contented smile. AZ did not pause to stare into space during this session and was able to continue to complete the mandala without taking a break. He looked towards the researcher and gestured the researcher to look at his mandala. AZ's gesture to interact with the researcher was the first attempt of SIS that he showed towards the researcher.

## Week 5



Figure 5: AZ's mandala for Week 5

AZ was given a more complicated design of mandala compared to mandala of week four. At first, he seemed unconfident to start the mandala as soon as he saw the given mandala. However, he gained confidence after the researcher provided him with more color pencils. The red color was chosen, and he applied it to the center of the mandala. Application of the first color to the center of the mandala indicated his self-assertion attitude towards completing the mandala. AZ did not work from the center and work gradually towards the edge of the mandala, but instead, he filled the four circles situated at the top, bottom, left and right sides of the mandala. He chose primary colours for the four circles, which is yellow, red, and blue with the addition of one secondary color that is green.

AZ's classmate who was included in the MAT session since the first session was

absent during this session. Due to the reason that AZ showed uncertainty to start the mandala in the beginning, the researcher provided him with more pencil colours, in which the extra color pencils belong to the student who was absent. AZ was very happy to see the amount of the pencil colours and was happily playing with the color pencils. The researcher attempted to initiate a conversation by suggesting, "*Why don't you use the pencil colours to color the mandala?*" AZ stopped playing with the color pencils and looked at the researcher. The suggestion prompted AZ to smile confidently, and he made the first eye contact with the researcher. AZ responded with, "*Color mandala*" and started to work on the mandala given. This session was significant as AZ responded with the researcher's attempt to make a conversation with him.

## Week 6



Figure 6: AZ's mandala for Week 6

AZ showed a significant improvement in the sixth week. The first choice of color is purple, and he applied it to the center of the mandala. Application of purple to the center indicated a positive meaning to his behavior. Purple is a combination of blue and red, therefore brings the sense of both red (energy) and blue (calm). AZ gradually applied a consistent color arrangement from the center to the eight layers of the mandala. Among the eight layers, the green color is seen to dominate the center section of the mandala. The green color in this mandala suggests AZ's growth toward his performance in completing the work of coloring the mandala. AZ placed yellow and blue next to each other. The yellow color was applied consistently to the small circles that are scattered to the whole mandala. AZ continued filling colours to the remaining outer section of the mandala with a variety of color choice.

AZ was also given a complicated mandala during the sixth session. The same amount of pencil colours was also given to AZ, as it motivated him to work on a more difficult level of mandala. AZ showed a

determined facial expression to start as soon as he saw that he was provided with many color pencils for this session. He managed to keep his focus for twenty minutes. However, he started to show hesitation to choose the next color pencils. The hesitation moment led to a display of self-stimulatory behavior and eventually his attention was interrupted. After a few minutes of hesitation, he started to stare into space. The teacher asked him to stop staring into space and continue to do his work. After hearing the teacher's comment, he looked at the researcher and pointed towards the teacher. He shook his head and said, "Teacher, no no." The researcher asked him "What is it AZ?" AZ kept responding to the researcher with "Teacher, no no", "Teacher don't like" and "Teacher, game over". He could not express the reason why he was dissatisfied with the researcher. However, this behavior showed that he is beginning to feel comfortable as compared to the earlier sessions of MAT. This session was significant as AZ initiated to talk and tried to express his feelings toward the researcher.

Table 1

*AZ's result score of AQ test (before and after six sessions of MAT)*

Area	Score	Before	After	Variance
Social skills		10	10	0
Attention switching		6	5	-1(2%)
Attention to detail		3	3	0
Communication		8	8	0
Imagination		7	7	0
Total		34(68%)	33(66%)	-1(2%)

The data in Table 1 showed that AZ improved in the field of attention switching. One item had improved in the attention-switching field, the item being, "S/he frequently gets so strongly absorbed in one thing that s/he loses sight of other things." AZ was extremely absorbed in the pattern of colour placement that followed a rigidly uniform sequence of colouring. However,

towards the end of the MAT, he was able to break this rigid behaviour by applying wider varieties of colours. Although the initial and after the score of AZ's AQ assessment did not show major changes where it had an overall improvement of 2%, there is a significant improvement of AZ's SIS.

Table 2

*AZ's first choice of color*

Session	Color	First choice
1		Blue (16.66%)
2		Yellow (16.66%)
3		Orange (16.66%)
4		Red (33.33%)
5		Red (33.33%)
6		Purple (16.66%)

Table 3

*Dominant colors in AZ's mandala*

Session	Color	Dominant
1		Blue (16.66%)
2		Gray (16.66%)
3		Red (50.00%)
4		Red (50.00%)
5		Red (50.00%)
6		Green (16.66%)

According to Table 2, AZ chose red twice out of six sessions, showing a percentage of 33.33%, while in Table 3, red was the dominant colors in three of AZ's

mandala out of six mandalas. From this observation, it can be concluded that AZ preferred to choose red color as his primary and major choice, followed by blue color.

Ward (1995) postulated that the preferences of color exert influence on human physiology and behavior. AZ started showing less hostility to the researcher from session four. He also started choosing red color and colored most part of his mandala as the first choice since session four. Red color may bring a personal meaning and symbol of positivity to AZ as

he felt less tensed since session four. Further observation is needed to investigate the actual meaning AZ place to red color, however, through the six sessions conducted, important data is obtained where red color brings significant meaning or symbol to AZ.

Table 4

*Placement of initial color in AZ's mandala*

Position	North	South	East	West	Centre	Edge
Session						
1					☐	✓
2						✓
3						✓
4					✓	
5					✓	
6					✓	
Percentage	0%	0%	0%	0%	50.00%	50.00%

As shown in Table 4, the percentage that AZ chose the centre and edge of the mandala as the initial placement of his colour choice is 50.00% respectively. The initial placement of his colour choice is also a strong indication of his current emotion, as seen in the initial placement of colour for session one to three, where he still felt uncomfortable with the researcher's presence in the classroom. However, AZ gradually showed less hostility to the researcher from session four until session six. Fincher (1991) claimed that the initial placement of colour at the center is an indication of self-esteem by the person creating the mandala. AZ started to show improvement on his SIS from the fourth session onwards, where the researcher tried to comfort him, as he felt unhappy with the teacher's comment towards his colour placement. The improvement of AZ's SIS changed significantly when he initiated more conversation by expressing his dislike towards one of the teachers to the researcher on the sixth session. AZ finally expressed his feeling towards the

researcher when he began to complain about the experience that distressed him. This behaviour showed an improvement of AZ's SIS throughout the six sessions of MAT. Fincher (1991) claimed that the initial placement of colour at the center is an indication of self-esteem by the person creating the mandala.

### Conclusion

This study presented favourable opportunities for AZ to delve deeper into his inner emotions and feelings through MAT. The findings from this study demonstrated that MAT is useful in the development of SIS and psychological welfare of a student with ASD. The application of mandala art therapy has a lot of implications for individuals with ASD who could be advantageous to the activity of individual expression. The applications of mandala drawing for the therapeutic and healing features have been renowned for centuries. The inclusion of mandala in

therapy is a safe and effective therapeutic approach to delve into the unconscious world of individuals with ASD. As illustrated through AZ's experience, mandala art therapy can apply as an intervention to serve individuals with ASD to facilitate growth in various manners. Mandala art therapy is a potential tool for self-expression and to foster an appropriate communication. It is an important intervention tool and a vital method for individuals with ASD because it can assist in building connections that see beyond the individual's capability or cultural background. Through this case study, it is suggestible that mandala art therapy may be able to offer the tool to bridge the mind and reality as a role of communication to translate the inner mind to a tangible form without the need of verbal skills.

### Limitation and Suggestion of the Study

The one-hour session of MAT was insufficient for better observations to be made. As a consequence, this is a limitation of the study, as longer time is required to make further observations to the participant. The one-hour observation during MAT session in the classroom was the only time that progress of the participant's SIS could be observed. Therefore, as this study was carried out in a controlled environment with a time constraint, further observation needs to be carried out to investigate how their SIS is reflected in their homes, during activities in the special development centre, and in public environment. The researcher should make further observations to find out whether the participant can apply SIS in their daily activities after the MAT sessions. Rather than depending solely obtaining information of the development of the participant through teacher, it is more valuable for the researchers to observe the participant on his own. By personally observing the participant in a setting outside the classroom, an in-depth outcome can be obtained where it can further

authenticate the effectiveness of MAT to improve the SIS of children with ASD.

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