

EC PSYCHOLOGY AND PSYCHIATRY Research Article

Artistic Painting Experiences and Relief of Psychological Stress among Carers of Autistic Children

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Abstract

Artistic experiences of paintings were employed to reduce psychological stress among carers with autistic children. A total of sixteen participants were recruited from a membership of 256 carers of autistic children. They were randomly assigned to experimental and control groups each composed of eight participants. The experimental group was offered three sessions of painting experiences based on the themes of image expression, self-exploration and integration of body and mind. Psychological stress levels were measured by the Chinese Perceived Stress Scale, before and after the period of intervention that lasted for two months. Statistics showed that stress levels were significantly improved for the experimental group while there was no change in the control group. At the same time experimental group showed significantly lower stress level than the control group while there were no difference in the beginning. The findings were supplemented by qualitative data from collected from interviews of experimental group members after each of the three sessions. Feelings of hope, faith, responsibility, warmth, dawn of victory, good times, courage, faith, unconditional love, tolerance and being needed have replaced self-reproach, loss, confusion, anxiety and fear that were common to most participants.

Keywords: Artistic Experience; Carers of Autistic Children; RCT; Psychological Stress

Introduction

A survey showed that 75.4% of the carers of autistic children have mental health problems, which are higher than the parents of normal children to varying degrees in somatization, obsessive symptoms, interpersonal sensitivity, paranoia, psychosis and other test options [1]. Psychological stress among carers of autistic children comes from many aspects of life, the most important one is from the physical condition of the child itself, which belongs to stimulus-oriented stress; It is closely related to the understanding and bearing capacity of autistic children's carers, which belongs to interactive-oriented stress. There is few special and systematic research on the application of artistic experiences to the psychological problems of these carers.

Educator John Dewey expounded the relationship between art process and body, mind and spirit in his monograph "Art as Experience" [2]. Herbert Read [3], in his monograph "Education through Art", revealed that art could promote the expression and development of

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emotion and the integration of personality, thus enhancing the sound and harmonious development of personality. Viktor Lowenfeld [4] revealed the relationship between painting and growth and proposed the concept of "Art Education Therapy".

Edward Adamson [5], a pioneer of British art therapy, emphasized the significance and role of images. He believed that spontaneous painting revealed hidden personalities opposed to the "conscious self". Adamson [6] further pointed out that images in his work could speak volumes about "self". Barbara Ganim [7] illustrated the amazing healing power of art that worked for both creators and viewers. Meng [8] an early scholar of art therapy in China, systematically introduced the theoretical basis, and effectiveness in use of art in psychotherapy. Following studies substantiated the therapeutic effects of artistic experiences among Chinese subjects through a large number of cases [9-11].

This paper studied the function of artistic experience, painting in this case, on psychological stress among carers of autistic children with an experimental design by combining qualitative and quantitative analysis.

Artistic experience of painting is an intuitive experience of beauty. In this process, subjects present their own observation, feeling and thinking of life to complete aesthetic or creative experience. Studies in many fields, such as pedagogy, psychology and literary theory, have mutually confirmed the effects of artistic experience on psychological stress relief. Yang [12] believed that the mechanism of artistic experiences of painting to relieve psychological stress consist of three parts: Expression of imagery, Self-exploration and Integration of body and mind. Artistic experiences of painting can be divided into three parts: artistic creation experience, artistic appreciation experience and artistic environment edification of painting.

Artistic creation experience of painting is a visual expression of the subconscious mind. The subject expresses his personal mood and emotion with his paintings, so as to complete self-analysis and questioning. Artistic appreciation experience of painting, is the visual experience of beauty, the subjects get spiritual pleasure or inspired by appreciating other people's paintings. Artistic environment edification of painting is providing space in line with aesthetic needs, so that individuals in the space are in a happy and relaxed state, so as to maintain the balance of body, mind and spirit.

This study focused on artistic creation experience of painting through independent creation in which participants vent inner depression and boredom and other negative emotions into their paintings, so as to alleviate their inner pain. Consequently, they understood themselves better, specified and solved emotional problems, and finally achieved self-redemption.

Methodology

Ming Ai Family Resource Center of Zhuhai Disabled Persons' Federation has 256 members, all carers of autistic children. Members have established a WeChat group under the organization.

From these members, 16 subjects were recruited on voluntary basis. They were randomly divided them into Experimental group (E Group) and Control group (C Group) with 8 subjects each. Participants of E Group completed the whole painting experience and those of C Group adopted a free painting sessions with no psychological interventions.

Psychological Stress measured by the Chinese version of the Perceived Stress Scale (CPSS) with 14 items developed by Yang and Huang [13] was utilized for between and within group comparisons with pretest and posttest design. Total score below or equal to 28 is regarded as "Normal", between 29 and 42 is considered as having moderate level of stress and above or equal 43 shows high stress.

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To construct the artistic experiences of paintings three sessions based on Yang's Model of Mechanism of Artistic Experience were organized for the E Group participants that spanned for roughly two months, at an interval of three weeks between each session. The themes of the three sessions were 1) Expression of imagery, 2) Self Exploration and 3) Integration of Body and Mind. Detail instructions to guide the painting exercises were listed in table 1.

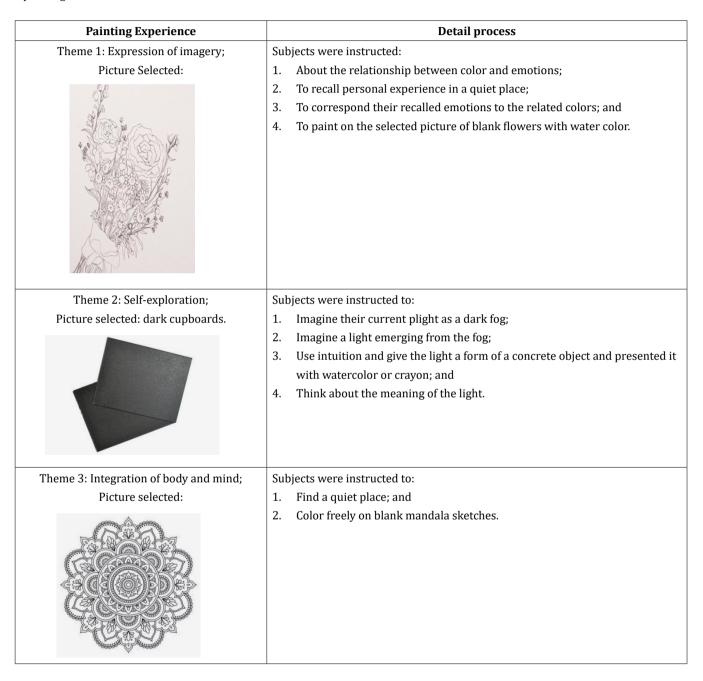


Table 1: Themes of three artistic painting experiences and respective procedures.

According to Fan [15], who quoted Lin Meng Ping, after painting treatment guidance, evaluation of change in subjects can be done in the form of semi structured interview. To capture the emotional states and changes in the three artistic painting experiences, a list of questions (See table 2) were raised to the participants after each session, on one to one basis carried out online by We-chat platform.

| Painting Experience | | Questions | | | |
|--------------------------------|----|---|--|--|--|
| Theme 1: Expression of imagery | 1. | What kind of experiences do you recall? | | | |
| | 2. | What kind of mood did the color you chose represent at that time? | | | |
| | 3. | How did you feel when you created this paint? | | | |
| | 4. | Do you feel relieved after your creation? | | | |
| Theme 2: Self-exploration | 1. | What specific events or feelings of discomfort do this dark mists bring to your mind? | | | |
| | 2. | What does this light remind you of? | | | |
| | 3. | If this painting could talk, what do you think it was saying? | | | |
| | 4. | How do you feel when you paint light to break the darkness? | | | |
| | 5. | How did you change your mind through this experience? | | | |
| Theme 3: Integration of Body | 1. | What kind of experience does this Mandala painting bring to you? | | | |
| and Mind | 2. | How has the Mandala painting changed your inner sense of security? | | | |
| | 3. | How did the process of painting change your mood? | | | |
| | 4. | Do you feel your ability to focus has changed after this experience? | | | |

Table 2: Semi-structured interview questions.

The experiment lasted for two months. A total of 24 paintings from E groups were collected. Transcripts of the interviews were developed for the identification of key emotional themes as reported by the participants.

Findings

CPSS results

Among all 16 participants in both groups, 7 or 43.75% of them scored 43 points or higher showing "High stress", scoring 29 - 42 points there were 9 participants or 56.25%, showing "Moderate stress". No subjects show lower than 29 points or "Normal stress" (Table 3). It indicated that carers with autistic children in general have moderate to high level of stress.

| Score | P1 | P2 | Р3 | P4 | P5 | P6 | P7 | P8 | Total | Mean |
|------------------|----|----|----|----|----|----|----|----|-------|--------|
| E Group Pretest | 57 | 41 | 44 | 44 | 30 | 41 | 46 | 34 | 337 | 42.125 |
| E Group Posttest | 55 | 34 | 38 | 37 | 25 | 32 | 40 | 29 | 288 | 36 |
| C Group Pretest | 56 | 45 | 46 | 38 | 38 | 39 | 41 | 33 | 336 | 42 |
| C Group Posttest | 56 | 44 | 47 | 39 | 37 | 37 | 41 | 33 | 334 | 41.75 |

Table 3: CPSS results of E and C Groups before and after the experiment.

Stress levels curve of E Group participants moved down significantly, with the mean score decreased by 6 points for all participants. Three subjects were "lowered" from "High" to "Moderate" and one subject "Moderate" to "Normal" (See figure 1).

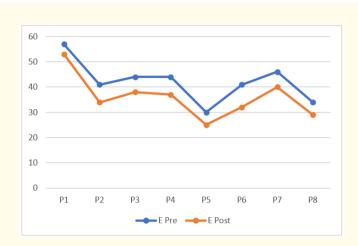


Figure 1: Stress levels of E groups before and after experiment.

The average decrease for C Group was only 0.25 points (See figure 2). Effect of free painting activities on psychological was totally negligible.

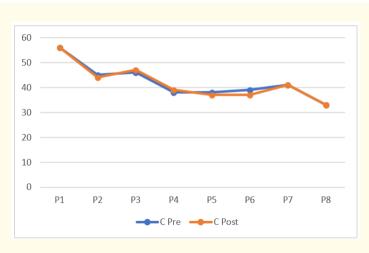


Figure 2: Stress levels of C group before and after experiment.

Statistical significance

Table 4 showed all results of T-tests of CPSS. Differences of stress levels between E and C Groups was insignificant before the experiment (M = 0.125, SD = 3.786), t(14) = 0.033, t(14)

Change in Test results of E group from before to after the experiment was significant (M = 0.286, SD = 0.109), t(14) = 2.611, p = 0.01. Test results of the C Group showed that there was no significant difference of stress levels before and after the experiment (M = 0.25, SD = 3.559), t(14) = 0.07, p > 0.05.

Finally the test results of E Group and C Group after the experiment indicated that there was a significant difference in stress levels between groups in which the former performed much better than the latter (M = 0.55, SD = 0.409) t(14) = 1.345, p < 0.05.

However, as the size of both groups were small, with only 8 participants each, a supplementary comparison of Change in CPSS scores was calculated by subtracting the pretest scores from posttest scores for each participants. T-test was then conducted for the experimental and control groups. It showed that there was a significant difference in changes between the two groups as participants of experimental group have performed better in terms of lowering their stress level (M = -5.625, SD = 0.8059), t(14) = -6.979, p = 0.000).

Statistical results confirmed that for the Experimental Group, the intervention of Artistic Experience was effective in lowering the stress levels of participants with the Control Group having little improvement in the same period of two months of experiment.

| Comparison | Mean | SD | t | df | Sig. |
|----------------------------|--------|--------|--------|----|-------|
| Between groups Pretests | 0.125 | 3.786 | 0.033 | 14 | 0.974 |
| E Group Pre and Post tests | 0.286 | 0.109 | 2.611 | 14 | 0.010 |
| C Group Pre and Post tests | 0.250 | 3.559 | 0.070 | 14 | 0.945 |
| Between groups Post tests | 0.55 | 0.409 | 1.345 | 14 | 0.020 |
| Between groups in Change | -5.625 | 0.8059 | -6.979 | 14 | 0.000 |

Table 4: Comparisons of stress within groups and between groups.

Content analysis of interview transcripts

For participants in E Group, interviews were scheduled for all 8 participants (P1 to P8) on one to one, face to face basis. Altogether 3 painting exercises were conducted. The responses were summarized in the following tables, corresponding to the three separate paintings (Table 5-7). All three painting experiences have led to positive changes in the stress levels of participants.

Q1: What kind of experiences do you recall?

Their experience mainly included children's education and care, family relations, and interpersonal communication. In terms of children's education and care, P3, P4, P5 and P8 expressed remorse, loss and confusion: "How could I give birth to such a child", "language barriers...difficult to communicate", "learning slowly...difficult to make progress", "who will take care of my child after my death"; Instead, P1 and P6 were more optimistic: "he has value to be developed by me" "...parents of normal children should also be around their children".

In terms of family relations, P7 often argues with his wife, "home is turned into a battlefield". In terms of interpersonal interaction, P2 "felt anxious, even fearful".

Q2: What kind of mood did the color you chose represent at that time?

P3 mainly used blue, expressed depression and remorse; P8 used single color to express confusion; P1 and P4 used various color and were complex in mood, which are difficult to describe; P2 and P7 used mild colors for high expectations: "I want to make myself happy" and "I long for freedom"; P5 and P6 were more optimistic, and "try to experience happiness with bright colors" express "tenacious and upward vitality".

Q3: How did you feel when you created this painting?

P1 felt pain and sadness in her heart, "just like being stabbed by a needle". P4 and P6 felt escaping, "outwardly happy, but secretly very depressed", "do not want others to know that I am unhappy", "want to be alone, do not want to be troubled by the child" "few people can understand". P2 and P7 "Feel a sense of security and belonging" "It may give me hope..". P3 and P8 felt eager to achieve change, and "strive to live healthily and wait". P5, on the contrary, "feel that I should learn to be content".

Q4: Do you feel relieved after your painting?

P3 and P4 felt relieved and thought of their real life: "There used to be such a vase at my home". In addition to feel relieved, P1 P5 P6 and P7 also found something new: "Everything works for each other, depending on how you look at it. My kid is worth something too". "After thinking about it in a different way, it gets easier". "Replace negative emotions with positive emotions". "Constraint is also a kind of care". P2 and P8, instead, felt conflicted: "I don't know. I still don't know if spring will

Table 5: Interviewee responses to first painting experience.

The first painting experience aimed at catharsis of negative emotions. All subjects were able to open their hearts and vent their negative emotions that were never shown to others, such as self-reproach, loss, confusion, anxiety and fear, and other contradictory and complex emotions. In the process of painting, most subjects understood and accepted their negative emotions, and showed the willingness to change their negative emotions. After painting, 75% of the subjects (6 out of 8 subjects) felt relaxed, while 25% (2 subjects) were still in a state of psychological ambivalence.

Q1: What specific events or feelings of discomfort do this dark mists bring to your mind?

3 subjects related to their own confusion. P1: "I doubt my ability and feel confused". P4: "There is no telling when this kind of care will come to an end". P7: "Where is my way forward?"

3 subjects were associated with feelings of struggle and frustration. P3: "I feel struggling inside". P6: "I expect my children to get better. But after trial and error, my expectations dwindled". P8: "Worry and care, irreconcilable contradiction".

1 subject was associated with a sense of helplessness towards life. P5: "All my time rotates between work and care, like a machine.

1 subject had associations with other people's perceptions of her. P2: "Many people thought I would be too hard to live".

Q2: What does this light remind you of?

7 subjects gave the light positive image including hope, belief, duty, warmth, the dawn of victory, good anticipation and her child.

1 subject, instead, gave the light a image of the end of time.

Q3: If this painting could talk, what do you think it was saying?

P1: "Hummingbird, my patron saint...the most indefatigable, flapping its wings all the time, fast, powerful and persistent".

P2: "A deer...very athletic and has mysterious powers".

P3: "A dolphin. It can understand the language...and the world of autistic children".

P4: "A dog. I happen to have a dog... I like to chat with it".

P5: "Dragon...Level up with me in life".

P6: "The mother duck...Although my child is ill, she is still my baby".

P7: "A cat. They say cats have nine lives. They're tough".

P8: "Nine color deer gives infinite hope".

Q4: How do you feel when you paint light to break the darkness?

3 subjects felt courage, faith and determination. P1: "I found the value of self and the courage of life from painting". P2: "Immortal hope". P7: "There are more ways than difficulties".

2 subjects felt unconditional love and tolerance for children. P3: "it's not the child's fault that their life is disrupted by their illness. P6: "I don't care what other people think ...no matter what, I will use love to my child".

3 subjects felt their real needs. P4: "Taking care of children is stressful, and being at home adds to that stress. I wish I could have a good rest". P5: "I hope to get more understanding and support". P8: "I wish there was an antidote for all my worries".

Q5: How did you change your mind through this experience?

The attitude of 4 subjects changed from sorrow and pain to brave and positive in the face of problems and difficulties. P1: "I seem to be less sad, a kind of power in my heart". P2: "It's just hard to think about the problems. When you actually face them, they are not very difficult". P5: "Problems are like monsters. You can only solve one problem after another". P7: "Every family has problems. I'm the man of the house. I can't back down".

2 subjects strengthened their sense of identity and responsibility as mothers. P3: "A mother has to be responsible for her children". P4: "Even though I sometimes feel exhausted physically and mentally, as a mom, I have to persevere".

1 subject changed from caring about what others think to focus on her own life. P6: "Some people may say that I have no progress and development, but I feel it doesn't matter to accompany my child to live a flat life".

1 subject didn't change much, just said (P8): "Live with dignity and leave with dignity".

Table 6: Interviewee responses to second painting experience.

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The second painting experience aimed at expanding positive consciousness to fight negative emotions. These emotions include hope, faith, responsibility, warmth, the dawn of victory, good times and so on. In the process of painting, the subjects found courage, faith and determination. They discovered their unconditional love, tolerance and need. After painting, 75% of the subjects (6 subjects) experienced significant reduction in stress, while 12% (1subject) experienced some reduction in stress.

Q1: What kind of experience does this Mandala painting bring to you?

3 subjects combine artistic beauty with emotion. P1: "I titled the work "Sequence, Connection, Balance"...a balance of beauty in their interconnection. P2: "The evolution of snowflake polygons is my inner imagination". P3: "Disorder and incomplete, but I feel good".

4 subjects got perception and inspiration experience from creation. P4: "Like taking a deep breath". P5: "Engaged and accomplished".

P6: "Reconciliation with self". P7: "It's like I'm going inside and talking to myself".

However, P8 felt helpless, "I don't know where to start and where to end".

Q2: How has the Mandala painting changed your inner sense of security?

6 subjects felt safe and controlled, and forgot their troubles in the creation. "Surrounded by love and security" (P1); "Repose and peace" (P6); "A sense of flow and integration". (P7); "It was complicated...After I finished, I feel it was not that tricky". (P5); "I haven't done it yet, but it's manageable. I can handle it". (P3); "Feeling very calm, the pace of life seems to slow down...lessen panic and powerlessness". (P4)

2 subjects felt some sense of security and control, but still had some focus on their worries. "A mystical power, but also some sadness". (P2); "A slight change. I didn't finish it, but I know the boundary. " (P8)

Q3: How did the process of painting change your mood?

3 subjects had a change in their attitude towards life. "Be grateful and find a new balance in my life". (P1); "Love life, look at the positive side of life, and love myself and the people around me". (P2); "Focus on my life and try to experience the joy of caring for my child".

(P4)

2 subjects had a change in their attitude toward their child's autism. "I should have redefined my child's illness in a positive way" (P3);

"Taking care of children is my greatest mission now and in the future" (P6);

3 subjects showed improvement in mood. "Very relaxed, and forget about anxiety" (P5); "Settle down". (P7); "A moment of peace". (P8)

Q4: Do you feel your ability to focus has changed after this experience?

2 subjects felt their ability to focus has been improved. "I was more focused, especially when I drew a strong contrast between light and shade". (P2); "There is change, understanding and communication are important". (P7)

4 subjects not only felt their ability to focus has been improved, but also wanted to practice in daily life. "In the future, when I have anxiety emotions, painting will become a new world of psychological peace". (P1); "I have been cultivated and grown up in painting". (P6); "In the days ahead I should give myself a proper respite and relaxation". (P4); "Try to solve problems in this state in the future".

(P5)

2 subjects had some changes, but they are not long-term. "There should be change, but it needs persistence," (P3); There are some changes. But I don't know for how long. (P8)

Table 7: Interviewee responses to third painting experience.

Third painting experience aimed at improving their personality. The subjects began to enjoy sense of safety and control in painting with relaxation. In the painting process, subjects showed concentration and the ability to solve difficulties. After painting, 88% of the subjects (7 subjects) reported stress relief. Here, one subject was caught in a special situation. In the initial test, he exhibited high level of stress. After completing all 3 painting experience his score, though lowered but still exceeded 49 and high stress remained. Effectiveness of artistic experience to people with extremely high stress has yet to be examined.

Conclusion and Discussion

Quantitative results confirmed that there was a significant difference between the two groups in changes of CPSS scores, with the experimental group showing better performances. Artistic experiences with specially designed structure have decreased stress levels in the experimental group. Nevertheless small sample size implies that the findings should be interpreted cautiously.

Participants of the experimental group all expressed in the follow up interviews that painting experiences have helped them to release their negative emotions. They also deliberately reported a progressive process of emotional relief, that stress levels were decreased from one painting experience to another. Possibly these positive comments were due to Hawthorne Effect as participants knew that they were undergoing an experiment. Close relationships developed between researcher and participants and tendency to provide socially desirable answers might also skewed the results toward positive. With these cautions, restorative effects of painting experiences are still surprisingly impressive.

British writer Alain de Botton and John Armstrong [16] pointed out that art could expand our innate abilities and compensate for our weaknesses, namely psychological defects. They identified seven weaknesses that correspond to the seven functions of art of Memory, Grief, Self-understanding, Finding balance, Hope, Growth, and Appreciation.

In the first painting experience participants showed psychological weaknesses of self-reproach, loss, confusion, anxiety and fear. After the second painting participants reported of experiencing hope, faith, responsibility, warmth, the dawn of victory, good times, courage, faith, unconditional love, tolerance and being needed. When it came to the third painting, subjects showed concentration and the ability to solve difficulties. They began to enjoy in a relaxed manner sense of safety and control in painting.

Transpersonal psychology, which emerged in the late 1960s and is still flourishing today, explores the ultimate value of human spirit and potential and the complete realization of the true self [17]. The theory holds that "imagery is therapy" and explores the mind and transcendental consciousness in works of art. Garai [18] advocates that individuals can awaken creativity, achieve self-realization and internal and external integration through art creation, and thus promote self-transcendence. In the practice of creation, it has achieved the effect of integrating emotional, psychological and physiological experience, promoting the transformation from unconsciousness to consciousness and awakening the spirit.

Nevertheless, whether the kinds of innate abilities regarded by participants as crucial to recovery can be generalized, has yet to be confirmed.

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