



---

## **Effectiveness of Art Therapy Intervention to Reduce the Level of Parenting Stress and Negative Emotions of Mothers of Hydrocephalus Patients**

**Qisthy Mirvi Farisah<sup>1</sup>, Monty P. Satiadarma<sup>2</sup>, Roswiyani Roswiyani<sup>3</sup>**

Tarumanagara University, West Jakarta, Indonesia

qisthy.717212015@stu.untar.ac.id<sup>1</sup>, montys@fpsi.untar.ac.id<sup>2</sup>, roswiyani@fpsi.untar.ac.id<sup>3</sup>

---

### **KEYWORDS**

stress, negative emotions, mother, hydrocephalus, art therapy.

---

### **ABSTRACT**

Children with developmental disorders such as hydrocephalus need assistance in carrying out their daily activities. Mothers who are caregivers for children with hydrocephalus are prone to experiencing stress and negative emotions because children with hydrocephalus are very dependent on their mothers. In previous research, many have said that it is important to pay attention to mothers who have children with disabilities, but not many have provided direct intervention to reduce stress levels and negative emotions for mothers. Intervention art therapy can be a cathartic medium for mothers to express their feelings and relieve their emotional tension. This study aimed to view the effectiveness of art therapy interventions in reducing participants' stress levels and negative emotions. This research is an experimental study with a one-group pre-posttest design involving seven mothers who have an age range of 20-40 years, have children with hydrocephalus, and are directly involved in their care. Differences in levels of stress and negative emotions were measured using the Perceived Stress Scale-10 (PSS-10) from Cohen et al. (1983) and the Positive and Negative Affect Schedule (PANAS) from Watson et al. (1988). Based on the results of the analysis using the paired sample t-test, it was found that there were significant differences in the level of maternal stress ( $t=8.910$ ,  $p=.000$ ), negative emotions ( $z=-2.032$ ,  $p=.042$ ) and positive emotions ( $z=-2.371$ ,  $p=.018$ ). These results indicate that art therapy interventions can reduce levels of parenting stress and negative emotions, as well as increase positive emotions in mothers who have children with hydrocephalus.

---

DOI: 10.58860/ijsh.v3i3.170

---

**Corresponding Author:** Qisthy Mirvi Farisah

**Email:** qisthy.717212015@stu.untar.ac.id

## **INTRODUCTION**

Parents of children with special educational needs experience higher levels of parenting stress than parents of typical children (Miranda et al., 2019). The stress experienced by mothers is higher than that of fathers (Philpott et al., 2017). Parents, especially mothers who have children with hydrocephalus, will experience a lot of stress because hydrocephalus is a disorder that requires routine treatment, is relatively complex, and will require relatively high treatment costs; this is supported by the results of the research found by (Mangi, 2016) that mothers who have children suffering from hydrocephalus experience stress caused by the child's physical condition which looks different from normal children in general and other people's views on the child's condition. Apart from that, hydrocephalus suffered by children also affects social aspects, such as the weakening of relations between the family and the surrounding environment. The family feels embarrassed by the child's condition and withdraws from interacting with the environment. (Shattnawi et al., 2023) Added that mothers who have children suffering from hydrocephalus disorders experience shock, sadness, and

confusion about their children's conditions and feelings of shame for their children's physical conditions, so they avoid the surrounding environment.

Researchers said that parents of children with special educational needs experience more negative emotions than parents of normative children. This is added to the findings of (Bujnowska et al., 2021), who said that parents who have children with developmental disorders of any type experience higher stress compared to parents without developmental disorders. Several things can cause parenting stress in raising children with special needs, such as child behavior problems, high caregiver demands, stigma, and financial tension. Parents of children with disabilities also experience more negative emotions than parents of normative children. When parents experience many negative emotions and intense stress from parenting, they will have fewer positive relationships with their children; for example, they will communicate less with them (Buchanan et al., 2023). In addition, when parents experience emotional and physical exhaustion, they may have less mental capacity to understand their children's needs (Jeon et al., 2018). They tend to apply more negative parenting practices (Clayborne et al., 2021). As a result, children will also react negatively in this regard and display more damaging behavior, which will cause parents to experience more negative emotions and stress.

Researched 544 children aged 6-13 years with spina bifida, hydrocephalus, or both; they reported that these children had a low quality of life in terms of self-care, movement/activity, school activities, anxiety, vision, communication, resulting in dependence on parents, less peer interaction, and low social acceptance (Duzgun, 2020). Another study by (Ayano et al., 2021) conducted research on 75 families with children aged 3 to 6 years with hydrocephalus at the pediatric clinic at a university hospital; they investigated the mental health problems experienced by the parents of these children and found that the parents experienced anxiety. In addition, (Shattnawi et al., 2023) conducted qualitative research on mothers of children with hydrocephalus to identify the problems they experienced and report a decrease in their quality of life. Parents of children with developmental problems also often experience fatigue and burnout, lack of rest, less time for self-care, disappointment in interpersonal relationships (reliance on others), more financial burden, and worries about the child's future (Oti-Boadi et al., 2022).

Says that having a child with a disability has psychological effects that disturb parents. For parents who have a child with a disability, attention to their child's health can cause stress that will affect the health of both parents and the child (Cantwell et al., 2014). The research by (Rick et al., 2023) states that parents of children with disabilities have psychological conditions such as feelings of guilt, deep sadness, having less than solid hopes for the future, and having unrealistic goals that cause them to turn away from their children. The mother's wrong attitude in managing negative emotions will affect the mother's and child's mentality. Increased pressure and stress can make mothers lose the ability to reason, so what happens when mothers accompany children to learn from home is that mothers find it difficult to control their emotions towards children, ranging from saying harsh words to children, yelling, hitting, and pinching to killing children. Meanwhile, if it is about the child's mental condition, it can make the child less confident (Anastasia, 2020). As a result of this stress, parents of children with special needs may be more prone to depression and anxiety (Scherer et al., 2019). The negative thoughts that arise will easily make a person or parent anxious (Situmorang, 2018). As with depression, parental anxiety can hurt a child's development, often causing anxiety and depression in children (Yap et al., 2014).

According to the results of research conducted by (Wielki, 2020), Coping stress carried out by mothers of sufferers, namely trying to find social support, some participants stated that when they

wanted to tell problems to other people due to unfavorable views from the environment, the informant was reluctant to tell. (McIntyre & Murphy, 2016) suggests that families, especially those directly involved in caregiving, need interventions to reduce stress and increase positive emotions to improve family welfare. Interventions for both stress and depression should focus on the individual's subjective perception of the experience as stressful and on the individual's inability to control the situation. According to (Hobfoll Freedy, 2017), it is essential to develop interventions to reduce their stress by providing knowledge of their ability to understand their needs, pay attention to the point of view, and understand the thoughts and feelings of their children. Another opinion was also expressed by (Paterson, 2022), who suggested that families, especially those directly involved in caring for children with neurological disorders, need interventions that aim to reduce stress and increase positive emotions.

Considering this, an intervention is needed to overcome parenting stress and reduce negative emotions possessed by mothers of hydrocephalic children. One of them is art therapy intervention. According to (Maghanga, 2022), art therapy is a medium that can provide solutions to reduce anxiety and express deep emotions. Art Therapy can help individuals minimize anxiety and release tension (Czamanski-Cohen & Weihs, 2016). In addition, art therapy can be a medium to express feelings and thoughts through drawing and provide information related to emotional development, cognitive function, and expression of ambiguous feelings (Hoemann et al., 2019). By drawing, individuals can improve verbal communication and understanding and solve problems that can make positive changes when facing internal conflicts to find a way out. It is a therapeutic process that helps overcome emotional conflicts, increase self-awareness, solve problems, and increase self-esteem.

Art therapy can provide benefits such as increased awareness, reality testing, problem-solving, cathartic media, and dealing with conflict and self-integration as an individual. Art therapy can also be a way to express pent-up emotions such as anxiety, fear of rejection, low self-esteem, anger, and various other emotions (Permatasari et al., 2017). Research conducted by (Murray et al., 2021) has proven that there is the effectiveness of art therapy intervention in reducing anxiety. According to the humanist psychological theory by Carl Rogers, individuals have the potential for self-direction through acceptance and empathic listening. Individuals will feel free to express and release thoughts into concrete form and can find solutions to the problems faced; as in art therapy intervention, the individual will be heard to explain his/her creation, thoughts, and perspective on the situation. There is research conducted (Sezen & Ünsalver, 2019) explaining that expressive art therapy is effective in reducing the stress levels of mothers who have children with developmental disabilities. In the intervention, mothers can release emotional tension and self-exploration, positively change their responses, and improve their interpersonal relationships. This study aims to view the effectiveness of art therapy in reducing parenting stress and negative emotions using a one-group design with a pretest-posttest quasi-experiment, more specifically on mothers who have hydrocephalic children.

Hydrocephalus in the study of the field of clinical psychology. This research is expected to provide practical benefits in the form of input for psychotherapy practitioners to determine intervention approaches for clients and types of psychotherapy that are alternatives for clients on parenting stress and negative emotions through the process of creating art. The study can also provide input for mothers experiencing parenting stress and negative emotions to obtain new insights into reducing parenting stress and negative emotions. Lastly, to provide input to families of mothers who have children with hydrocephalus to always provide positive support for the individual concerned.

According to (Csikszentmihalyi & Csikszentmihalyi, 2014), it is essential to develop interventions to reduce their stress by increasing empathy, as well as reducing anxiety by providing knowledge of their ability to understand their needs, pay attention to their point of view, understand the thoughts and feelings of their children. One of them is art therapy intervention. According to (Malchiodi, 2020), Art therapy is a medium that can provide solutions to reduce anxiety and express the most profound emotions. Art Therapy can be a medium to express feelings and thoughts through drawing and provide information related to emotional development, cognitive function, and expression of ambiguous feelings (Vaartio-Rajalin et al., 2021). By drawing, individuals can improve verbal communication and understanding and solve problems that can make positive changes when facing internal conflicts to find a way out. Based on the framework and theory that has been presented, the researcher can formulate a hypothesis, namely, that Art Therapy Intervention can reduce parenting stress and negative emotions of mothers of hydrocephalus sufferers.

The benefits of this research are to expand insight and knowledge as well as literature regarding art therapy interventions in reducing the level of parenting stress and negative emotions in mothers who have children with

## **METHOD**

### **Research Design**

This research applies an experimental method with a one-group pre-post test design. The sampling technique used purposive sampling technique. Participants completed Perceived Stress, Positive Affect, and Negative Affect questionnaires before and after the intervention. This research has been approved by the Ethics Committee of the Human Related Research Unit of the Faculty of Psychology, Tarumanagara University (KEPTM Unit F.Psi Untar) with No. 301-TIM/KEPTM/3058/FPsi-UNTAR/X/2022)

### **Participants**

The participants in this study had the following criteria: (a) Participants are 7 primary caregiving mothers with children suffering from hydrocephalus at the early adulthood stage, aged 20-40 years, (b) Experiencing Parenting Stress and negative emotions based on measurements using the Perceived Stress Scale-10 (PSS-10) developed by Sheldon Cohen in 1983 and the Positive and Negative Affect Schedule (PANAS) (Watson et al., 1988), (c) Have not previously participated in a series of Art Therapy interventions, and participants are not limited by race, ethnicity, profession, or religion, (d) Willing to be research participants.

### **Measurements**

The measuring instruments in this study are PSS-10 (Perceived Stress Scale-10) and PANAS (Positive et al.) to measure aspects of positive affect and negative affect developed by Watson, Clark, and Tellegen (in Tran, 2013). The scale contains twenty items, ten measuring positive affect (such as happy and excited) and ten measuring negative affect with a Cronbach's alpha value of >0.84. The scoring on this scale is in the range of 1-5 with the provisions positive affect, score of 5 for SK (Very Often) answers, score 4 for AK (Moderately Often) answers, score 3 for the answer S (Moderate), score 2 for the answer L (Rare), and score 1 for the answer ( Very Rare). On negative affect, score 5 for the answer SL (Very Rarely), score 4 for the answer L (Rarely), score 3 for the answer S (Moderately), score 2 for the answer AK (Somewhat Often), and score 1 for the answer SK (Very Often).

### **Procedure**

Participants were selected through the distribution of digital posters in the Jabodetabek area. Participants who fit the criteria are registered via the g-form link on the poster. Then, participants

were given an informed consent form and filled out a questionnaire regarding parenting stress and negative emotions. Next, participants followed the intervention program for 4 sessions for four weeks. After completing the intervention program, participants completed the same questionnaire as before running the intervention.

### **Data Analysis Techniques**

The data obtained will be analyzed quantitatively using the SPSS program version 25. This data processing aims to show the results of providing art therapy interventions to reduce the level of anxiety and negative emotions of mothers of hydrocephalus patients. The first data processing applies descriptive statistics techniques that show demographic data from all participants who participated in this study, such as age, gender, domicile of residence, etc. Next, use Kolmogorov-Smirnov to view the distribution of data that has been obtained. Then, it is carried out using the paired sample t-test technique (if the data is normally distributed) or the Wilcoxon signed-rank test (if the data is not normally distributed) to view the difference before and after the intervention. Then, the independent sample t-test technique was used to obtain additional research results from the demographic data.

### **Intervention**

The art therapy intervention program implemented in this study applied the art therapy method of Barbara Ganim (1999). The intervention consisted of 4 sessions lasting 60-90 minutes each session.

## **RESULTS AND DISCUSSION**

All participants were primary caregivers of children with hydrocephalus. Participants ranged in age from 23-40 years old. 29% of participants were employed and 71% were housewives. Education in high school is 71% and in college 29%. The majority ethnicity is Betawi 71% and Sundanese 29%, Married status 85% and divorced 15%, number of children, one child is 42%, two children are 14%, and three children are 42%.

### **Normality Test**

Based on the results of the normality test recapitulation, it can be seen that the parenting stress variable before and after art therapy has a significance value greater than 0.05 or regular. In comparison, in the emotion variable, two conditions have a significance value smaller than 0.05, meaning that the emotion variable data is only partially normally distributed.

**Table 1 Normality Test Results**

#### **Variables**

#### **Pre-test**

#### **Post-test**

Variables	Mean	SD	mean	SD	Mean difference	t / z	p
Perceived Stress Scale	26.00	3.10	13.57	2.99	12.43	t= 8.190	,000
Positive Emotions	25.85	6.31	31.42	3.95	- 6.57	z= - 2,032	,042
Negative Emotions	36.57	4.86	23.71	7.78	12.86	Z= -2.371	0.18

### **Emotions**

Based on descriptive analysis related to the level of stress experienced by mothers before being given art therapy, the percentage of moderate stress levels was 57% (n = 4) 0%, and severe stress at 43% (n = 3). At the same time, the stress level after being given art therapy intervention was mild stress at 57% (n = 4) and moderate stress at 43% (n = 3).

Table 1 shows the change in scores on the parenting stress variable based on the pre-post test scores on the parenting stress variable. The paired sample t-test analysis showed a significant difference between the pre-post test with a value of  $t = 8.910$ ,  $p = .000$ . Then, based on the difference in mean values, participants experienced decreased stress levels of 12.43. This shows that art therapy intervention can reduce the stress level of mothers of children with hydrocephalus.

#### **Positive Emotions**

Based on descriptive analysis related to the level of positive emotions experienced by mothers before being given art therapy, the percentage of moderate positive emotion levels was 57% ( $n = 4$ ) 0%, and low-level positive emotions were 43% ( $n = 3$ ). Meanwhile, the level of positive emotions after being given art therapy intervention, namely high positive emotions of 14% ( $n = 1$ ) and moderate positive emotions of 86% ( $n = 6$ ).

Table 1 shows the change in scores on the positive emotion variable based on the pre-post test scores on the emotion variable. The paired sample t-test analysis showed a significant difference between the pre-post test with a value of  $z = -2.032$ ,  $p = .042$ . Then, based on the difference in mean values, participants experienced an increase in positive emotions by 6.57. This shows that art therapy intervention can increase the level of positive emotions of mothers of children with hydrocephalus.

#### **Negative Emotions**

Based on descriptive analysis related to the level of negative emotions experienced by mothers before being given art therapy, the percentage of high harmful emotion levels was 86% ( $n = 6$ ). Moderate negative emotions were 14% ( $n = 1$ ). At the same time, the level of negative emotions after being given art therapy intervention was moderate negative emotions at 43% ( $n = 3$ ) and low negative emotions at 57% ( $n = 4$ ).

Table 1 shows the change in scores on the negative emotion variable based on the pre-post test scores on the emotion variable. The paired sample t-test analysis showed a significant difference between the pre-post test with a value of  $z = -2.371$ ,  $p = .018$ . Then, based on the difference in mean values, participants experienced a decrease in negative emotions by 12.86. This shows that art therapy intervention can reduce the level of negative emotions of mothers of children with hydrocephalus.

#### **Discussion**

This study aims to view the effectiveness of art therapy intervention in reducing the level of parenting stress and negative emotions in mothers who have children with hydrocephalus. In the first finding, it was found that art therapy can help reduce parenting stress and negative emotions in mothers with children with hydrocephalus, according to the data showing that the score of parenting stress levels and negative emotions arrived for each participant. In the implementation of the intervention, it was found that parenting stress and negative emotions existed in mothers in the form of feelings of anxiety, sadness, and anger tending to be alone. On average, participants said it was difficult to tell their feelings because other people did not understand their condition. As said by (Erkan et al., 2022) believe that expressive art therapy is effective in reducing the stress levels of mothers who have children with developmental disabilities. In the intervention, the mothers can release emotional tension through self-exploration, and the mothers' responses are changed more positively. They can improve their interpersonal relationships. In this case, art therapy acts as a cathartic medium for mothers who cannot always express the conditions they are experiencing statement that Art Therapy is a healing medium from various situations, such as relieving tension by presenting thoughts and feelings that cannot be expressed, describing the invisible and pouring ideas that are difficult to express verbally (Venuti, 2017).

In the second finding in this study, it was found that art therapy intervention increased positive emotions in mothers who had children with hydrocephalus. In line with what has been explained by (MAGHANGA, 2022), art therapy can help individuals solve their problems, improve interpersonal skills, manage and control inappropriate behavior, and reduce stress levels. The same thing happened in a previous study conducted by (Fredriksen-Goldsen & Kim, 2017) on 35 cancer patients at the art therapy department of the Mesos Medical Center, Utrecht, The Netherlands, which found that there were positive changes in coping with emotions, development of creativity, It increased positive emotions to better realize the meaning of life of participants after art therapy and improve the quality of life in general. What needs to be noted from the research results, especially regarding the positive affect score, is that one participant had a decreased score compared to before the intervention.

During the evaluation process and the post-test given during the research, the participant explained that a while ago, before the post-test data collection, she found that her child's health condition had declined, which affected her feelings at that time. However, these participants' scores on negative affect and parenting stress tended to decrease more favorably. When viewed from the research results, art therapy can significantly reduce the scores of parenting stress and mothers' negative emotions. Significantly, it can increase the positive emotion scores of the participants by observing from the explanation that art therapy changes a person for the better can be achieved.

The third finding is in the demographic data, which shows a level of parenting stress in the age category. Before the intervention, mothers aged 21-30 years had more severe stress scores than mothers aged over 30 years. After the intervention, mothers aged 21-30 years had more severe stress scores than mothers aged over 30 years with the same composition as before the intervention. This is in line with (Ramadhany et al., 2018) on the level of parenting stress in mothers who have children with intellectual disability found that factors related to the stress of parenting mothers with the level of child's intellectual disability, mother's age, occupation, income, education, and social support. As for the results of other studies that show that younger mothers have higher parenting stress, (Fernandy et al., 2020) mention several factors that influence parenting stress, such as maternal age, employment and family income, education, gender of the child, marital status, and the results of this study showed that on average, mothers aged 36 had higher levels of parenting stress than most mothers aged 38. It was found that older mothers are more mature in controlling emotions. Hence, the mother's response to the problems she faces becomes effective. This is influenced by the relatively young age of the mother, which affects the ability to practice parenting. Based on the results of this study, it has been previously tested (Hu et al., 2021) that housewives have higher stress levels than working mothers.

The fourth finding is in the demographic data, which shows that people in the age category have negative emotions. Before the intervention, mothers aged 21-30 years had fewer high negative emotion scores compared to mothers aged over 30 years. After the intervention, mothers aged 21-30 years had more moderate negative emotions compared to mothers aged over 30 years, with more moderate than mild negative emotions. The fifth finding is in the demographic data, which shows that in the age category, there are positive emotions. Before the intervention, mothers aged 21-30 had lower positive emotion scores than mothers aged over 30 years. After the intervention, mothers aged 21-30 had the same high positive emotion scores as mothers aged over 30 years. In line with previous research by (Monteiro et al., 2020) who conducted research with participants of a mother of a cerebral palsy patient on emotional regulation and stress levels, it was found that the mother's emotional regulation in the low category was possible because the mother's age was 28-32 years or said to be a young age. Based on the results of (Kim Kang, 2017), it is stated that age is related to the ability to regulate emotions; the older the individual's age will affect the ability to regulate emotions better.

The sixth finding is in the demographic data, which shows that there is a level of parenting stress in the category of maternal employment. Before the intervention, working mothers had higher levels of severe stress than non-working mothers. After the intervention, working mothers had higher levels of moderate stress than non-working mothers with the same composition as before the intervention. This is in line with previous research conducted by (Wang et al., 2021), which suggests that working mothers experience higher levels of parenting stress compared to non-working mothers. As for other research by (Fernandy et al., 2020), his research shows that most mothers do not work; namely, 25 people (73.5%) are in the mild category.

The seventh finding is in the demographic data, which shows that there are negative emotions in the category of maternal employment. Before the intervention, working mothers had lower negative emotions than non-working mothers. After the intervention, working mothers had lower levels of moderate emotions than non-working mothers. Then the eighth finding is in the demographic data, which shows that maternal employment has positive emotional levels. Before the intervention, working mothers had lower levels of moderate positive emotions than non-working mothers. After the intervention, working mothers had a lower level of high positive emotions than non-working mothers, with less increase before the intervention. This is in line with the results of research (Zahra, 2018), which found that the emotional development of working mothers tends to be higher than non-working mothers.

The ninth finding is in the demographic data, which shows that there is a level of parenting stress in the mother's education category. Before the intervention, mothers who had a college education had a higher level of severe stress than mothers who had a high school education. After the intervention, mothers who had a college education had a higher level of moderate stress than mothers who had a high school education with the same composition as before the intervention. This contradicts the results of research by (Fernandy et al., 2020), which shows that in his research, most of the mothers' education is High School (SMA), namely 19 mothers (55.9%), the value of parenting stress is higher than (44.1%) college mothers. It is said that maternal education can also affect a person's readiness to carry out their functions and roles as parents.

The description of the participants in this study should be our concern for parenting stress and negative emotions of mothers of patients with hydrocephalus conducted on 7 mothers showing a reasonably high score before the intervention, namely everyday stress ( $n = 4$ ) and severe stress ( $n = 3$ ) while negative emotions were in the high ( $n = 6$ ) and moderate ( $n = 1$ ) categories. In the findings of this study, the participants talked about the fact that they sometimes have problems expressing what they are going through and where to talk and complain. However, on the other hand, mothers must be a substantial figure for their children and families to be still able to provide the best. Apart from problems in childcare, other factors are on the minds of mothers, such as economic conditions in their families and conflicts with the environment due to the condition of their sick children. Some participants shared that they felt alone and lost when they had a child with the condition. However, the financial conditions obtained during the dialogue affected the mothers' stress and negative emotions.

The strength of this study is that it is the first study that focuses on the conditions of parenting stress and emotions that exist in mothers who have children with hydrocephalus limitations. This study also utilizes reliable measurement tools, namely PSS-10 (Perceived Stress Scale-10) and PANAS (Positive et al.). The research was also carried out offline so that there were controlled results for each treatment. This research had many sessions, so there was relatively good closeness between participants and researchers. The method used in this research by Barbara Ganim is very supportive



and suitable for participants experiencing parenting stress and negative emotions. Participants in this study were very cooperative in attending each session, regularly scheduled for taking and administering intervention simultaneously every week. However, there are shortcomings in this research, including the condition of the participants, who were mothers of hydrocephalus sufferers who could not leave their children. Research must be carried out simultaneously and in a different place. This research also has a limited number of participants, which still needs to be added due to the difficulty of finding participants willing to complete the series of art therapy sessions to enrich the research data. Future research can conduct art therapy activities in groups to obtain more support from fellow mothers of hydrocephalus patients.

## **CONCLUSION**

This research found that art therapy intervention was effective in reducing the level of parenting stress and negative emotions of mothers who were directly involved in caring for children with hydrocephalus every day and increasing positive emotions. Future research is expected to pay more attention to the number of participants to enrich the data and expand the research area in Jakarta and Bekasi. The method in future research is also suggested with the Barbara Ganim method. However, it can also apply other approaches adapted to the population's needs so that research on parenting stress and a mother's negative emotions will develop further. Future research could have a control group and apply a mixed-method research design. This study utilized the Positive Affect, Negative Affect, and Perceived Stress Scale 10 measuring instruments. In future research, various other measuring instruments can be utilized, and follow-up can be carried out again to determine the effectiveness of the art therapy intervention.

## **REFERENCES**

- Anastasia, T. (2020). How Parents Can Control Emotions When Accompanying Their Children to Online Schools. Accessed from <https://www.clickdoctor.com/infosehat/read/3644254/cara...>
- Ayano, G., Betts, K., Maravilla, J. C., & Alati, R. (2021). The risk of anxiety disorders in children of parents with severe psychiatric disorders: a systematic review and meta-analysis. *Journal of Affective Disorders*, 282, 472–487. <https://doi.org/10.1016/j.jad.2020.12.134>
- Buchanan, D., Hargreaves, E., & Quick, L. (2023). Schools closed during the pandemic: Revelations about the well-being of 'lower-attaining' primary-school children. *Education 3-13*, 51(7), 1077–1090. <https://doi.org/10.1080/03004279.2022.2043405>
- Bujnowska, A.M., Rodríguez, C., García, T., Areces, D., & Marsh, N.V. (2021). Coping with stress in parents of children with developmental disabilities. *International Journal of Clinical and Health Psychology*, 21(3), 100254. <https://doi.org/10.1016/j.ijchp.2021.100254>
- Cantwell, J., Muldoon, O. T., & Gallagher, S. (2014). Social support and mastery influence the association between stress and poor physical health in parents caring for children with developmental disabilities. *Research in Developmental Disabilities*, 35(9), 2215–2223. <https://doi.org/10.1016/j.ridd.2014.05.012>
- Clayborne, Z.M., Kingsbury, M., Sampasa-Kinyaga, H., Sikora, L., Lalande, K.M., & Colman, I. (2021). Parenting practices in childhood and depression, anxiety, and internalizing symptoms in adolescence: a systematic review. *Social Psychiatry and Psychiatric Epidemiology*, 56, 619–638.

- Csikszentmihalyi, M., & Csikszentmihalyi, M. (2014). Attention and the holistic approach to behavior. *Flow and the Foundations of Positive Psychology: The Collected Works of Mihaly Csikszentmihalyi*, 1–20.
- Czamanski-Cohen, J., & Weihs, K. L. (2016). The body-mind model: A platform for studying the mechanisms of change induced by art therapy. *The Arts in Psychotherapy*, 51, 63–71. <https://doi.org/10.1016/j.aip.2016.08.006>
- Duzgun, M.V. (2020). Factors Affecting the Anxiety Level and Quality of Life of Parents of Children with Hydrocephalus. *International Journal of Caring Sciences*, 13(2), 1382–1391.
- Erkan, Z., AFŞİN, B., & KIRAN, B. (2022). Examination Of The Effect Of The Online Psycho-Education Program On Increasing Emotional Awareness Through Art Therapy Of Mothers With Children Aged 0-5. *International Journal of Eurasian Education and Culture*, 7(17), 793–827.
- Fernando, N., Dewi, E., & Juliningrum, P. (2020). The Relationship between Spirituality and Parenting Stress for Mothers of Mentally Retarded Children. *Sriwijaya Nursing Journal*, 7(2), 25–33.
- Fredriksen-Goldsen, K.I., & Kim, H.-J. (2017). The science of conducting research with LGBT older adults introduction to aging with pride: National health, aging, and sexuality/gender study (NHAS). In *The Gerontologist* (Vol. 57, Issue suppl\_1, pp. S1–S14). Oxford University Press US. <https://doi.org/10.1093/geront/gnw212>
- Hobfoll, S. E., & Freedy, J. (2017). Conservation of resources: A general stress theory applied to burnout. In *Professional burnout* (pp. 115–129). Routledge.
- Hoemann, K., Xu, F., & Barrett, L.F. (2019). Emotion words, emotion concepts, and emotional development in children: A constructionist hypothesis. *Developmental Psychology*, 55(9), 1830. <https://doi.org/10.1037/dev0000686>
- Hu, C., Hart, S., Gnanaolivu, R., Huang, H., Lee, K., Na, J., Gao, C., Lilyquist, J., Yadav, S., & Boddicker, NJ (2021). A population-based study of genes previously implicated in breast cancer. *New England Journal of Medicine*, 384(5), 440–451. 10.1056/NEJMoa2005936
- Jeon, L., Buettner, C.K., & Grant, A.A. (2018). Early childhood teachers' psychological well-being: Exploring potential predictors of depression, stress, and emotional exhaustion. *Early Education and Development*, 29(1), 53–69. <https://doi.org/10.1080/10409289.2017.1341806>
- Kim, N., & Kang, S. (2017). Older and more engaged: The mediating role of age-linked resources on work engagement. *Human Resource Management*, 56(5), 731–746. <https://doi.org/10.1002/hrm.21802>
- Maghanga, C. (2022). Challenges Of Mothers Bearing Children With Hydrocephalus: A Case Study Of Mombasa County, Kenya. pwani university.
- Malchiodi, C. A. (2020). *Trauma and expressive arts therapy: Brain, body, and imagination in the healing process*. Guilford Publications.
- Mangi, D. A. (2016). An exploration of social predicaments facing children with hydrocephalus: the Muhimbili Orthopedic Institute case study. The Open University of Tanzania.
- McIntyre, M. L., & Murphy, S. A. (2016). The theory of practice and the practice of theory. *Industry and Higher Education*, 30(2), 109–116. <https://doi.org/10.5367/ihe.2016.0300>
- Miranda, A., Mira, A., Berenguer, C., Rosello, B., & Baixauli, I. (2019). Parenting stress in mothers of children with autism without intellectual disability. Mediation of behavioral problems and coping strategies. *Frontiers in Psychology*, 10, 437799.

- Monteiro, F., Pereira, M., Canavarro, M. C., & Fonseca, A. (2020). Be a mom's efficacy in enhancing positive mental health among postpartum women presenting low risk for postpartum depression: Results from a pilot randomized trial—*International Journal of Environmental Research and Public Health*, 17(13), 4679. <https://doi.org/10.3390/ijerph17134679>
- Murrar, S., Johnson, P. A., Lee, Y.-G., & Carnes, M. (2021). Research on women was deemed more impactful but less publishable than those conducted on men. *Journal of Women's Health*, 30(9), 1259–1267. <https://doi.org/10.1089/jwh.2020.8666>
- Oti-Boadi, M., Osei-Tutu, A., & Mate-Kole, C. C. (2022). Challenges and support needs of parents of children with developmental disabilities (DD) in Accra, Ghana—*Research in Developmental Disabilities*, 128, 104274. <https://doi.org/10.1016/j.ridd.2022.104274>
- Paterson, R. J. (2022). *The assertiveness workbook: How to express your ideas and stand up for yourself at work and in relationships*. New Harbinger Publications.
- Permatasari, AE, Marat, S., & Suparman, MY (2017). Application of art therapy to reduce depression in the elderly in Nursing Home X. *Muara Journal of Social Sciences, Humanities, and Arts*, 1(1), 116–126.
- Philpott, L.F., Leahy-Warren, P., FitzGerald, S., & Savage, E. (2017). Stress in fathers in the perinatal period: a systematic review. *Midwifery*, pp. 55, 113–127. <https://doi.org/10.1016/j.midw.2017.09.016>
- Ramadhany, SD, Larasati, TA, & Soleha, TU (2018). Factors related to the level of parenting stress in mothers who have mentally disabled children at SLB Dharma Bhakti Dharma Pertiwi. *Journal of Agromedicine*, 4(2), 287–292.
- Rick, A.-M., Laurens, MB, Huang, Y., Yu, C., Martin, TCS, Rodriguez, CA, Rostad, CA, Maboia, RM, Baden, LR, El Sahly, HM, Grinsztejn, B., Gray, GE, Gay, CL, Gilbert, PB, Janes, HE, Kublin, J.G., Huang, Y., Leav, B., Hirsch, I., ... Sobieszczyk, ME (2023). Risk of COVID-19 after natural infection or vaccination. *EBioMedicine*, 96, 104799. <https://doi.org/https://doi.org/10.1016/j.ebiom.2023.104799>
- Scherer, N., Verhey, I., & Kuper, H. (2019). Depression and anxiety in parents of children with intellectual and developmental disabilities: A systematic review and meta-analysis. *PloS One*, 14(7), e0219888.
- Sezen, C., & Ünsalver, B. Ö. (2019). Group art therapy for the management of fear of childbirth. *The Arts in Psychotherapy*, 64, 9–19. <https://doi.org/10.1016/j.aip.2018.11.007>
- Shattnawi, K.K., Qananbeh, F.S., & Khater, W. (2023). The experiences of mothers of children with hydrocephalus in Jordan: A phenomenological study. *Journal of Pediatric Nursing*, p. 69, e127–e135. <https://doi.org/10.1016/j.pedn.2022.12.026>
- Situmorang, DDB (2018). How does cognitive behavior therapy view the academic anxiety of the undergraduate thesis? *Islamic Guidance and Counseling Journal*, 1(2), 69–80.
- Vaartio-Rajalin, H., Santamäki-Fischer, R., Jokisalo, P., & Fagerström, L. (2021). Art making and expressive art therapy in adult health and nursing care: A scoping review. *International Journal of Nursing Sciences*, 8(1), 102–119. <https://doi.org/10.1016/j.ijnss.2020.09.011>
- Venuti, L. (2017). *The translator's invisibility: A history of translation*. Routledge.
- Wang, H., Zhang, T., Lu, M., Zeng, Y., Xiao, Y., Ren, X., & Zhang, P. (2021). Effects of physical activity and counseling interventions on health outcomes among working women in Shanghai. *Journal of Sports Science & Medicine*, 20(1), 77. 10.52082/jssm.2021.77

- Wielki, J. (2020). Analysis of the role of digital influencers and their impact on the functioning of the contemporary online promotional system and its sustainable development. *Sustainability*, 12(17), 7138. <https://doi.org/10.3390/su12177138>
- Yap, M., Pilkington, P., Ryan, S., & Jorm, AF (2014). Parental factors associated with depression and anxiety in young people: A systematic review and meta-analysis. *Journal of Affective Disorders*, pp. 156, 8–23. <https://doi.org/10.1016/j.jad.2013.11.007>
- Zahra, W. (2018). A Study on Stress Levels of Children of Working and Non-Working Mothers. *International Multidisciplinary Research Journal (RHIMRJ)*, 5(1), 2349–2355.



© 2023 by the authors. It was submitted for possible open-access publication under the terms and conditions of the Creative Commons Attribution (CC BY SA) license (<https://creativecommons.org/licenses/by-sa/4.0/>).