Visual Journey of Motherhood: The Effects of Art Therapy Intervention for New Mothers Experiencing Increased Stress and Negative Affect

Visual Journey of Motherhood:

The Effects on Art Therapy Intervention for New Mothers Experiencing Increased Stress and Negative Affect

Eunkyung (also known as Eungyung) Kim

A Thesis in the Field of Psychology

for the Degree of Master of Liberal Arts in Extension Studies

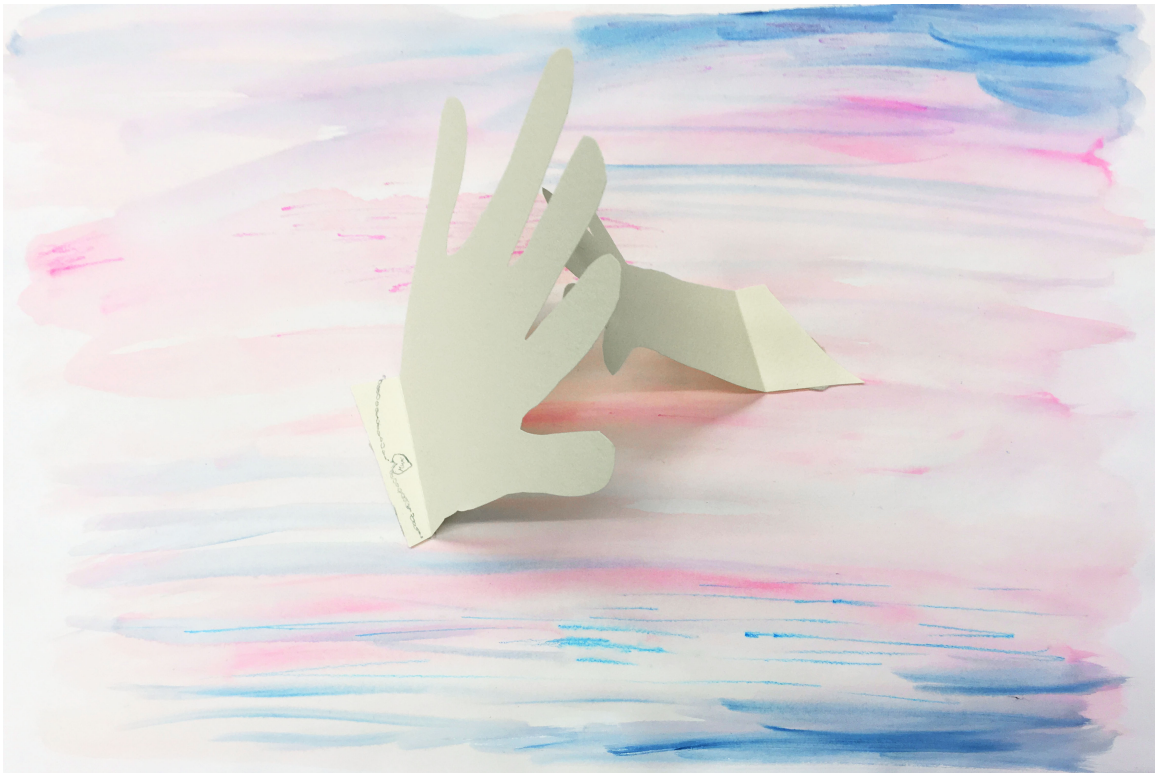
Harvard University

March 2020

Abstract

This study examined whether an art therapy intervention for first-time mothers with babies under the age of one would be effective in lowering their levels of anxiety, depression and stress as measured by the State Trait Anxiety Inventory (STAI: Y-6 item), Edinburgh Postnatal Depression Scale (EPDS) and Parenting Stress Scale (PSS). An open studio art group (art without therapy) and a family club (support without art or therapy) served as controls, in order to discriminate the aspects of art making and support with other mothers with babies. A total of 47 mothers participated in this study. It was hypothesized that mothers participating in the six-week art therapy group would indicate more improvement in their levels of anxiety, depression and stress compared to the two control groups. No significant differences were observed among the three groups, however, there was a trend toward greater improvement in all three measurements in the open studio art group. This result points to future explorations of art therapy and art as methods of prevention and treatment among first-time mothers who are healthy, who are at risk and who are suffering from postpartum mood disorders. This study contributes to the limited but growing number of empirical studies in the field of art therapy, and to the need for greater awareness in societies on the important issue of postpartum wellbeing.

Frontispiece



One of the images created in the art groups depicting a mother and her baby's hands.

Author's Biographical Sketch

Eungyung Kim received a Bachalor's of Fine Art from the State University of New York – Purchase College, then a Master's of Fine Art from the School of Visual Art in New York. During her two-month mission trip to a prison in South Africa in 2001 Eungyung was able to connect with young inmates through art. Creativity seemed to foster communication, reflection and aspiration amongst this community. Through this experience of the power of creativity, Eungyung decided to pursue her studies in art therapy. Since then, she has received a Master's of Professional Studies in Art Therapy from the School of Visual Art, and has worked with diverse people from toddlers to the elderly, using art and art therapy, in Korea, USA, Ethiopia and in Finland where she has been living since 2005. It is her passion to serve and inspire people to engage in art and creativity not only for the joy of art making, but also to gain self-awareness, experience recovery and growth.

Dedication

This thesis is dedicated to all mothers, in gratitude for their love, care and hard work, and in celebration of their joy and growth through mothering.

Acknowledgments

I would like to express my great appreciation to Dr. Dante Spetter, who served both as my research advisor and thesis director, for her thorough guidance and support throughout the entire process of this thesis- from the very start of the proposal till the very completion of it.

I would like to sincerely thank Helga Hagman, Iina Hunter, Pipsu Isola and Aura Hakuri for kindly facilitating the art and art therapy groups for this thesis. I am truly grateful to Albert's Living Room and its kind staff Lilli Öhberg, Gritten Naams and the volunteers, and to Alppila Church and Pauliina Lindfors for providing their space and resources to realize the research and for believing in my intention.

My sincere gratitude goes to all the first-time mothers and their babies who participated in the study. You have braved the daily challenges of small babies and sleepless nights, made it to the meetings and even expressed your gratitude for them. Thank you so much!

I would like to take this opportunity to express my gratitude and love to my loved ones. This work was not possible without them - my parents and brother for always loving and supporting me; my husband for being there for me through joy and hardship; Sei for giving me the possibility to grow as a mother and a person; and Naru for the most gentle comfort.

Above all, I thank God for the most amazing love and grace, which leave me speechless.

Table of Contents

List of Tables

List of Figures

Chapter I

Introduction

Can postpartum mothers' mood and adjustment to motherhood be improved by participating in art therapy interventions? A newborn baby elicits joy and delight for most mothers. However, first-time mothers report multiple stressors while caring for newborn babies: changing identity, changing family dynamics and physical exhaustion (Murphey, Carter, Price, Champion & Nichols, 2017; O'Hara, Stuart, Gorman, & Wenzel, 2000; Ponteri, 2001). In addition to the potential distress for the new mother, the stress and negative affect many women experience while adjusting to motherhood can have an effect on children's sensitivity to stress, and may affect their emotional and behavioral adjustment later in life (Brooker, Davidson, & Goldsmith, 2016; Essex, Klein, Cho & Kalin, 2002; Goodman et al., 2011; Robertson, Wallington, & Stewart, 2004). Providing new mothers with an opportunity to reflect, express and discuss these new challenges may enable them to cope better with stress, and, in the longer term, reduce the likelihood of their children from developing emotional and behavioral problems (Dennis, 2005; O'Hara et al. 2000; Ponteri, 2001).

Prevalence and Treatment of Postpartum Mood Disorders

Although negative mood and stress due to big changes in life are normal during early motherhood, these can lead some women to postpartum mood disorders (Lonstein, 2007). The most common mood disturbance observed after childbirth is postpartum or baby blues. Prevalence ranges from 30-75% of postpartum women. This is a mild mood

disturbance with onset at three to four days after delivery that lasts for a few days and is generally not treated as it occurs with decreases in hormonal levels and resolves as hormones stabilize (O'Hara, Schlechte, Lewis, & Wright, 1991; Robertson et al., 2004). Whereas the blues are common and resolve quickly (Seyfried & Marcus, 2003), the prevalence of postpartum depression, a clinically diagnosed mood disorder, ranges up to 13% of postpartum women (Gavin et al., 2005; O'hara & Swain, 1999). Gavin et al. (2005) reviewed 28 studies and reported the prevalence of major and minor depression to be 6.5% to 12.9% with 95% confidence intervals. O'hara & Swain's (1999) meta-analysis of 59 studies using self-report assessments and interviews with 12810 subjects reported the mean prevalence of postpartum depression to be 12.8%, with 12.3-13.4% confidence interval. Studies demonstrate similar rates of diagnosed anxiety in postnatal period. Additionally, there is a high comorbidity of anxiety and depression, and anxiety is also reported as a risk factor for postnatal depression (Matthey, Barnett, Howie, & Kavanagh, 2003; Wenzel, Haugen, Jackson, & Brendle, 2005).

Antidepressant medications such as serotonin re-uptake inhibitors (SSRIs) (e.g. paroxetine, venlafaxine, sertraline) and psychotherapy, such as Interpersonal psychotherapy and Cognitive-Behavioral Therapy, have shown to be effective in treating postpartum mood disorders (Cuijpers, Brännmark, & van Straten, 2008; Milgrom et al., 2015; Misri, Reebye, Corral, & Milis, 2004; O'Hara, 2009; O'Hara et al., 2000).

There are concerns about the safety of taking antidepressant medications during lactation and some mothers prefer psychotherapy or support from other mothers over pharmacological treatment during pregnancy and breastfeeding (Dennis & Chung-Lee, 2006; O'Hara et al., 2000; O'Hara, 2009; Sockol, Epperson, & Barber, 2011). A study of

Finnish mothers showed that they viewed peer groups as an important source of support. When interviewed, these mothers reported that they preferred peer-groups with strangers rather than talking with friends who had same aged children, as they worried about competing and hence, hindered them from honest discussions of feelings and problems (Tammentie, Paavilainen, Åstedt-Kurki, & Tarkka, 2004).

Interventions for Healthy New Mothers

Much of research on postpartum women has focused on postpartum mental disorders, however, the current literature addresses the need for a broader approach to tackle postpartum distress in women who are neither at high risk nor diagnosed with clinical mood disorders (Murphey et al., 2017; Navidian, Sarasiyabi & Koochakzai, 2017; Osman, Saliba, Chaaya & Naasan, 2014; Timlin & Simpson, 2017).

Murphey et al. (2017) investigated healthy low-risk new mothers who had given birth to healthy infants within 12 months of recruitment. This study revealed that among participants, the level of stress measured by The Perceived Stress Scales (PSS4 and PSS10) was moderately correlated with depression, anxiety and insomnia measured by the Hamilton Depression and Anxiety Rating Scales (HAM-D17 and HAM-A14), and Pittsburg Sleep Quality Index (PSQI19). Findings also showed that all participants (*N*=33) indicated symptoms consistent with moderate levels of depression and anxiety disorders, and 75.8% (*n*=25) of them had moderate insomnia measured by the scales mentioned above. Measuring of insomnia (PSQI19) was notably added in this study, as the authors argued that chronic sleep disturbance easily dismissed as normal in postpartum period can result in insomnia (Murphey et al., 2017). The overall findings

suggest a need for broader approach to address postpartum challenges. Thus, many women who are not identified as having a postpartum mood disorder may still be experiencing mood or anxiety symptoms and may benefit from intervention.

Despite the consensus that many new mothers would benefit from more support to address the stressful adjustment to motherhood, a review of 22 studies reported that universal postpartum support to unselected low-risk women did not show evidence of improvement in parenting, maternal mental and physical health and maternal quality of life (Shaw, Levitt, Wong, & Kaczorowski, 2006). Instead, interventions targeting specific risk factors showed significant improvement. For example, for women who are high-risk for either family dysfunction or postpartum depression, home visitation (difference -2.23, 95% CI –3.72 to –0.74, p= .004) and peer support (difference 6.23, 95% CI 1.40 to 27.84, p= .01) led to improvement in the Edinburgh Postnatal Depression Scale (EPDS) scores.

Whereas Shaw et al. (2006) reviewed studies conducted in developed countries primarily in North American, more recent work conducted in Lebanon and Iran showed positive effects when stress, rather than mood disorder, was targeted. In studying postpartum stress in low-risk mothers, Osman, Saliba, Chaaya & Naasan (2014) assessed two interventions. Healthy first time new mothers (N = 452) with healthy infants were randomized to interventions consisting of 20-minute film on postpartum stressors or 24-hour telephone line support, both interventions combined, and a music CD (control). The film addressed common postpartum stressors such as sleep deprivation, breastfeeding, return to work, sexuality and body changes. The hotline service was available for any questions or concerns a mother may have regarding infant care and mother's self-care.

Results showed that stress levels as measured using the PSS-10, were significantly reduced for participants who saw the film (15.76 ± 6.55) or watched the film and had access to the hotline service (15.86 ± 6.81) compared to control mothers (18.93 ± 7.03, $p < .01$). Also the stress levels of the mothers who had access to the hotline service (16.98 ± 6.42) were significantly reduced compared to the control condition ($p < .05$). However, the PSS-10 score of 13.7 (± 6.6) is considered average for females (Cohen, Kamarck, & Mermelstein, 1994), and the mothers had higher than average stress even after the intervention. In Finland, where this study took place, more extensive support films with lecture and discussions are already freely available three times to all pregnant women. While these classes cover both pre- and postnatal issues, they are offered not postpartum but prenatally. A 24-hour emergency hotline and a non-emergency daytime hotline are accessible to all Finnish parents. Yet, the prevalence of postpartum depressive symptoms is reported as 13% measured by the EPDS (Hiltunen, 2003; Tammentie, Tarkka, Åstedt-Kurki, Paavilainen, & Laippala, 2004), hence further investigation of interventions may be beneficial.

Navidian, Sarasiyabi & Koochakzai (2017) examined a home-based supportive-educational intervention on postpartum stress, specifically stresses related to maternal role attainment, negative body changes, and lack of social support in a sample of 100 first time mothers. Their study showed that postpartum stress measured by Hung Postpartum Stress Scale (HPSS) was significantly lower in women who received home-based supportive-educational intervention compared to the control ($p = .001$). This study relates to and supports the study cited above by Osman, Saliba, Chaaya & Naasan (2014) in that educational CD and supportive film are mentioned, however, the detailed information of

intervention is lacking. Again, in Finland, all mothers receive one home visit by the same maternal clinic nurse assigned during pregnancy who also sees the child regularly until the child goes to school.

The interventions used in the studies above included various kinds, such as film or doctor's visits, home visits by nurses, and phone call by nurses or trained peers. However, none of the interventions were provided by a trained mental health therapist, had a group format focusing on maternal issues or had an art component. Thus, while it appears that many forms of support can be helpful, there is very little research on group therapy of any kind for mothers who are not at high risk for or diagnosed with disorders, and none of it addresses art therapy versus other types of support and or therapy groups. Hence, this thesis aimed to provide a unique observation on the effect of art, therapy, and a very common local venue of family clubs on postpartum support.

Effects of Art Therapy on Stress, Anxiety and Depression

Art therapy has been used in a wide range of populations including children, the elderly, people with addictions, illnesses and disabilities (Malchiodi, 2007; Reynolds, Nabors, & Quinlan, 2000; Rubin, 2001; Slayton, D'Archer, & Kaplan, 2010). Rather than art therapy being a single therapy modality, it uses a variety of materials including painting, drawing, sculptures, photography and mixed media, and different theoretical frameworks, such as psychoanalytical, cognitive-behavioral, psycho-educational and humanistic approaches (Rubin, 2001). While some studies have failed to show significant effects on mental health benefits, a number of studies have supported the efficacy of art therapy in a variety of population, such as reduction in symptoms of trauma among patients with posttraumatic stress disorder and students with history of trauma;

depression among patients with cancer and incarcerated population; and burnout in doctors and nurses in oncology unit; and improvement of mood among undergraduate students (Reynolds, Nabors, & Quinlan, 2000; Slayton, D'Archer, & Kaplan, 2010). Because the literature lacks studies of art therapy for addressing postpartum challenges specifically, empirical studies of art therapy for treatment of depression, anxiety and stress in various other populations are reviewed below. Additionally, one art therapy study of new mothers and babies, despite the small sample size, is reviewed as it shares the subject with this thesis.

Curry and Kasser (2005) studied the effects of structured coloring of geometric forms on anxiety symptom reduction. The authors experimentally induced anxiety in the sample ($N = 84$) with a writing task. Then the participants were randomly assigned to one of three conditions -- coloring a mandala, which is a circular form often used in art therapy interventions, a control, geometric plaid form, and free form coloring. The mandala group showed more decrease in anxiety than the free form condition ($t(55) = -3.07$, $p = .003$), and the plaid group also decreased in anxiety compared to the free form group ($t(52) = -2.31$, $p = .03$). However, no significant difference was observed between the mandala and plaid groups ($t(55) = -.74$, $p = .46$). The authors suggest that the coloring of geometric forms may have provided a meditative state for the participants to reduce anxiety. Although all three art conditions did not involve any specific theme, coloring of a mandala and a plaid form may have also served as a distraction from the previous anxiety-inducing exercise, whereas free form coloring group may have been still thinking about the writing exercise. De Petrillo & Winner's (2005) study suggests that art making improves mood. Both art major and non-art major university students ($N = 62$) were

recruited for randomized clinical trials. After negative mood was induced by photos and films, participants either drew images about their mood or copied geometric shapes. The result supported their hypothesis that art making improved mood valence regardless of the majors, reflecting no effects of artistic skills or experience (art majors: $t(9) = 7.52$, $p < .005$; non-art majors: $t(11) = 8.68$, $p < .005$), however, did not significantly affect mood arousal for both conditions. This study, utilizing experimental design, provides support for the underlying assumption of art therapy, that art making facilitates healing.

Although the two studies above suggest that art making may improve mood, both studies used euthymic participants who experienced a brief mood induction in a laboratory setting. Furthermore, the authors concluded that the primary effect of the art intervention was distraction from the induced anxiety. In art therapy, more often art is used as a medium to engage clients to work on the very matters that may be causing distress, rather than as a distraction from a source of distress (Malchiodi, 2007; Rubin, 2001). For example, an art therapist may ask the client to create an image of his/her anger or depression, and they together discuss the image created in order to better understand his/her experience. Thus, they may have limited applicability to the current investigation, except to show that art making can influence mood.

In part to distinguish between the effects of art making from art therapy, in this study, directed art making with topics relating to postpartum period was compared with an open studio art group.

Working with women with HIV ($N = 18$), Field & Kruger (2008) compared a single session, six-hour doll-making art therapy group with a control group viewing comedy movies followed by discussion. Participants completed pre-test and post-test on

the day the groups met, and completed post-post-tests two weeks after the interventions. Women in the art therapy intervention reported decreased levels of depression measured by the Beck Depression Inventory-II (BDI-II; $t(16) = 4.11$, $p < .05$). Although Field & Kruger's (2008) population and aims differ from those of this thesis, their study provides relevant evidence that art therapy may be effective in reducing symptoms of depression and that the effects are stronger than those of a distracting comedy movie.

Mercer, Warson & Zhao (2010) report that visual journaling helped medical students and staff (N =10) reduce stress and increase positive affect. The participants were asked to draw images related to their stress and answer self-exploration questions that were designed to help them further understand their stress. Results showed that the anxiety level of the participants decreased on the State-Trait Anxiety Inventory (STAI-Y), and the negative affect scores also decreased on the Positive and Negative Affect Schedule (PANASX), however, positive affect scores stayed consistent. Additionally, a majority of the participants reported subjectively feeling that visual journaling helped them reduce stress and improve their mood. Participants also reported that they would like to continue journaling. However, the shortcoming of this study is too small a number of participants to show statistical significance. The art therapy intervention that was used for this thesis had a similar approach to the visual journal used in this study. However, the intervention in this thesis had a larger number of sessions (six weekly sessions) with specific themes focusing on postpartum issues. Considering previous art therapy studies, a larger sample size (N = 60) was aimed to enable further test of the effectiveness of such intervention.

Focusing on adjustment to parenthood, Ponteri (2001) argued that group art therapy for mothers and their infants could provide a safe environment to explore issues around mothers' identity, self-esteem and interaction with their infants. To my knowledge, this is the only published empirical study of art therapy with the population of new mothers. In her pre-test post-test design, Ponteri (2001) administered various measures both quantitative and qualitative, using art, questionnaires and assessment of a video taped play session. Four mother-child pairs met for eight weekly 90-minutes art therapy sessions. The art therapy interventions included mother and child body tracing and filling the images with collage, mothers drawing responding to infant's marks by crayons. The mothers also created images to reflect their source of stress and hope for changes, and images of their strength and success. Art therapy assessments of mother-child drawings using 14 items on the Formal Elements Art Therapy Scale (FEATS) showed mixed results, however, overall the pre-test post-test scores reflected improvement in mothers' self-image as a parent, self-esteem, adaptation to motherhood, and mother-child interactions. FEATS is a measure of psychological state by looking at the formal aspect of two dimensional art, such as drawing and painting (Gantt, 2004; Gantt & Anderson, 2009). FEATS was developed by art therapists out of needs for art-based assessment and to address issues of validity and reliability of informal art assessment and projective drawings (Gantt, 2004; Gantt & Anderson, 2009; Rockwell & Dunham, 2006). Since its development, it has been used for various studies of art therapy and inter-rater reliability (0.81, Ponteri, 2001; 9 out of 12 elements $p < .05$, Rockwell & Dunham, 2006) and accuracy for prediction of the diagnosis of Substance Use Disorder

specifically (85%, Rockwell & Dunham, 2006) have been addressed. However, there are insufficient numbers of empirical studies on the measure.

The Mother Questionnaire (MQ) was used to assess areas related to maternal depression such as competency, external support, guilt, self-image, and interaction with child. This questionnaire was developed by Ponteri herself and her co-facilitator and the paper does not specify its reliability or validity. On average, the mothers dropped 1.5 points, which reflects more competency and positive self-image from pretest to posttest. The Maternal Self-Report Inventory–Short Form (MSI-SF) assessed adaptation to motherhood and maternal self-esteem. The participants also dropped 1.5 points on average, which can be understood as more confident in childcare abilities, greater acceptance of their children, and more positive outlook on their future.

Ponteri (2001) further observed that half of the participants were able to demonstrate their improved relationship with their children in the drawing tasks, but were not able to integrate the change into their actual interaction with their children. This was reflected in their less gratification and higher negative affect shown on the Interaction Rating Scale (IRS), scoring the mother-child interaction, of the videotaped play sessions. This may be due to the short-term nature of the intervention and suggests future studies could employ longer-term interventions. However, Ponteri's (2001) study had a very small sample (four mother-infant dyads), which obstructed statistical analyses, and did not include a control group to compare the effectiveness of the art therapy group. Additionally, participants received psychoeducation for parenting in the art therapy group and they were involved with a county early intervention program, through which they may have been receiving other interventions. It is hence difficult to tease out the cause of

the improvement. Considering these points, this thesis compared art therapy group with two control groups.

Other Creative Interventions for Postpartum Women

Due to the lack of literature in the field of art therapy for postpartum women, other interventions should be reviewed. Lee (2010) examined the effect of music therapy on postpartum blues and maternal attachment of postpartum women (up to four weeks postpartum, N=60). 40-minutes daily music therapy for eight days at a postnatal care center was associated with lower the degree of postpartum blues (t=4.350, $p < .001$) and higher maternal attachment (t=4.828, $p < .001$). On the other hand, examining the levels of stress and anxiety of postpartum women among general population (N=77), Tseng, Chen & Lee's (2010) found that self-administered music therapy at home did not significantly reduce the level of stress measured by Perceived Stress Scale (PSS; F = 0.61, p = .438) and anxiety measured by State Anxiety Inventory (S-STAI; F = 1.30, p = .258). The results of the two music therapy studies are contrasting. However, there are notable differences in the study designs of those. While Tseng, Chen & Lee (2010) examined the general population of postpartum women, Lee's (2010) study recruited subjects who had higher than average score of Bai's (1997) postpartum Depression Scale. Also music therapy in Lee's (2010) was administered to women at postnatal care centers by the music therapist, whereas music therapy was self-administered at home for the subjects in Tseng, Chen & Lee's (2010) study. It maybe important to further investigate whether the self-administration without the qualified therapist or the subjects from general population versus high-risk postpartum women contributed to the result.

Timlin and Simpson's (2017) controlled randomized study on the effectiveness of Dru yoga on psychological wellbeing of healthy new mothers suggest that four weekly one-hour Dru yoga lessons with a 20 minutes DVD for practice at home reduced stress and negative affect. This was indicated by reductions in stress, negative affect, and dysfunctional coping and increases in problem focused coping at follow up ($p < .05$). Though important and novel study, its limitations include the fact that the main author served as the yoga teacher.

It is also important to note the different inherent nature of art making compared to the interventions of music therapy and yoga discussed above. When making images, one can express emotion and create meaning, which is different from listening to pre-selected music or to follow directed movements. Based on the positive effects of addressing maternal stress (Navidian, Sarasiyabi & Koochakzai, 2017; Osman, Saliba, Chaaya & Naasan, 2014), sparse yet relevant effects of art therapy in influencing mood, reducing symptoms of depression and assisting adjustment to motherhood (Curry and Kasser, 2005; De Petrillo & Winner, 2005; Field & Kruger, 2008; Ponteri, 2001), and positive effects of other creative modality for postpartum women (Lee, 2010; Timlin & Simpson, 2017), it was expected that women in the art therapy group would report lower levels of stress and better mood than women in either of the two control groups.

Hypothesis and Significance

Though there are various venues in which mothers can meet other new mothers and talk, such as clubs and groups, many of the organized activities focus more on babies and less on the wellbeing of mothers, or they specifically target mothers at high risk for

depression. Would participating in an art therapy group focusing on new mothers' wellbeing offer stress reduction and mood elevation for them?

Although there is a need for more evidence-based studies of art therapy, positive effects of art therapy interventions have been shown for depression, anxiety and stress (Curry & Kasser, 2005; Field & Kruger, 2008; Mercer, Warson & Zhao, 2010; Ponteri, 2001). Drawing on this evidence in various populations, the effectiveness of art therapy interventions for first-time mothers in reducing negative affect and stress was examined in this thesis. For this study, a series of directives was proposed, through which the new mothers could visually express their stories. It was hypothesized that first-time mothers with newborns participating in the art therapy group will cope better with stress, and have more positive moods than those in the control groups who either only make art without therapy component or gather to spend time with other mothers with babies without any art or art therapy.

A randomized trial comparing women in an art therapy group with women in either an open studio group (art without therapy) or a family club group (support without art or therapy) was conducted over six weeks. It was expected that women in the art therapy group would show reduced levels of stress, depression and anxiety after the experiment, indicated by lower scores on self-report instruments measuring stress, anxiety and depression, than postpartum women in the other two groups.

Given the prevalence of postpartum depression and anxiety, and their potential negative effects on infants, maternal stress and adjustment are important areas of research. This investigation would be an important contribution for broader population of new mothers experiencing negative moods and stress, beyond clinical postpartum

disorders, while managing the challenging task of caring for a newborn. Furthermore, an empirical examination of an art therapy modality would contribute to further understanding of the effectiveness of art therapy.

Chapter II

Methods

In order to examine the effectiveness of art therapy intervention for new first-time mothers compared to control groups, pre-tests and post-tests were administered before and after the six-week interventions.

Participants

For this study, primiparas were defined as those who have had their first baby, whose babies were under one-year old at the time the study began. Altogether 47 primiparas were recruited from maternity clinics, infant family services, baby activity groups and neighborhood family clubs in the Helsinki region in order to include participants with a range of affect levels. As this study focused on a non-clinical sample of new mothers, women with postpartum psychosis, and women who were taking medications for depression and anxiety were excluded. However, as this thesis aimed to investigate a broader population of new mothers, mothers with postnatal complications, premature delivery, or multiple births, as well as neonate's medical complications were included.

Measures for Maternal Affect, Stress and Childbearing Attitude

The following three measures were used to assess the levels of negative affect and parental stress.

A short-form of the state subscale of the State Trait Anxiety Inventory (STAI: Y-6 item; Marteau, & Bekker, 1992; Appendix 1 & 2) was used to measure the anxiety level of participating mothers. The State Trait Anxiety Inventory is a reliable and sensitive measure of anxiety. It is divided into two subscales, state, measuring the intensity of how one feels in the moment and trait, measuring how one feels in general (Julian, 2011). The short-form measures only state, which is appropriate to use for the short-term measure of changes in mood in this study. The short-form consists of alternating anxiety-present and anxiety-absent items and has shown to have acceptable reliability ($\alpha = .82$) and validity, and compatible scores compared with the full-length form (Marteau, & Bekker, 1992). A meta-analysis ($n = 7$) reports the test-retest reliability of the state subscale of STAI to be lower (M: .70, Median: .68, SD: .20) compared to Trait (M: .88, Median: .88, SD: .05), which reflects the time-related nature of the state subscale (Barnes, Harp, & Jung, 2002).

The Edinburgh Postnatal Depression Scale (EPDS; Cox, Holden, & Sagovsky, 1987; Appendix 3 & 4) is a 10-item self-report measure to screen postnatal depressive symptoms, although it is not a diagnostic tool. Scores higher than 12 indicate depressive illnesses. It can be completed in about 5 minutes and has been shown to have satisfactory validity, reliability and sensitivity to changes in depression over time (n=60, sensitivity 85%, specificity 77%, positive value 83%, split-half reliability 0.88, standardised α-coefficient 0.87).

The Parenting Stress Scale (PSS; Berry & Jones, 1995; Appendix 5 & 6), is a 18-item 5-point scale Likert-type questionnaire that assesses the level of stress experienced by parents. The scale includes various aspects of parental experiences such as positive and negative emotions of parenting and parental satisfaction. Six-week test-retest

reliability is reported as 0.81, and the correlations with other parental stress measurements range from 0.41 to 0.75 (Touliatos, Perlmutter, Strauss, & Holden, 2001).

Higher scores on all measurements indicate a higher measured level of postpartum depression, greater anxiety or more parental stress, and lower scores represent normal levels of all three outcomes, depression, anxiety, and stress.

STAI: Y-6 item and PSS were translated and back-translated to and from Finnish by Finnish-English translators. EPDS was available in a Finnish version. Ten participants were non-Finnish-speaking and as they preferred, they completed the measures in English.

Procedures

Approval from the Harvard Committee on the Use of Human Subjects was obtained. First time mothers ($N = 47$) were recruited through advertisements put both at physical sites and on internet sites of infant family services, baby activity groups and family groups in the Helsinki region. Personal visits and announcements were also made at these sites to recruit participants. Participants ($n = 32$) who signed up for the new mothers' art group were randomly assigned to one of the two intervention groups: art therapy group and open studio art group. Both participants and facilitators were blinded to the fact of the two different conditions.

Each intervention group was divided into two groups, so that each had a maximum of 10 participants, closer to the number of a therapy group. Thus, in total there were two art therapy groups which were treated as one whole group for analysis purposes and two open studio art groups which were treated as one whole group as well. Additionally, participants ($n = 15$) were recruited from a pre-existing family club. They

attended a pre-existing neighborhood club at various times and days of the week, and were treated as one control group. The experimental art therapy group was compared with two control groups -- the open studio art group and a gathering group from a family club. The open studio art group was needed to examine whether the effects of the art therapy group with a directive therapeutic focus differed from those of a non-directive simply art-making group. The two kinds of groups that involved art-making – art therapy and open studio -- somewhat reflect two different approaches of art therapy, art psychotherapy and art as therapy (Ulman, 2001). However, the open studio art groups were led by artists instead of art therapists, to keep the group as strictly an art group rather than another form of an art therapy group. The other control group, a family club, which exists in many small districts within the city of Helsinki, is a common venue for mothers with babies. The purpose of this control group was to examine whether the effects of the art therapy group differ from those of a simple gathering group connecting mothers in similar situations.

When the participants came into the first group, they were told what kind of group they were participating in, whether it was art therapy or an open studio art group, as well as the qualifications of the facilitators (i.e. whether they were art therapists or professional artists). After that, the participants signed consent forms to participate in the study; then they were given pre-tests, which included STAI: Y-6 item, EPDS and PSS.

Art Therapy Groups

Participants (n = 14) in the art therapy groups met for one and a half hours weekly for six weeks and created images that depicted experiences of motherhood. There was a

little room for adjustment, but both art therapy groups focused on issues close to the mothers' experience of having their first baby (Table 1).

The facilitating art therapists gave instructions to create an image on a weekly theme-- for example, on week one, "Create an image on your childbirth experience using the materials available." The participants were told that they could create images on the theme introduced however they understood and related to it, using whichever materials they wished to use. After the first 45 minutes of making images, participants were asked to show their images during the next 45 minutes, and verbally discuss their art works and/or the process of making the images, if they wished to do so. This format, including both art-making and discussion, reflected the format of a typical art therapy intervention. After the six-week experiment, the author administered post-test of STAI: Y-6 item, EPDS and PSS.

Open Studio Art Groups

Participants (n = 18) in the open studio art groups also met for one and a half hours weekly for six weeks to match the total duration of the art therapy group. The first facilitator in the open studio art group explained the art materials available, and instructed participants to use any materials they wanted and create any images they wished to make, with free choice of theme. However, the free choice of theme appeared to create frustration for some participants, and the second open studio art group facilitator offered some themes along with a choice to choose their own theme and material. The themes given by the facilitator included self-portrait, house/home, inspiration from art books, personal color map which showed which colors inspire oneself or which colors draw oneself to it at the moment. The facilitator also gave some suggestions in terms of the use

of materials, for example, to work with two different colors or materials and the mixture of the two (Table 1). All participants worked with the themes given by the facilitator instead of choosing their own theme.

The participants in the open studio art groups were encouraged to interact with other participants as well; however, no formal discussions were held. This was done so that it would resemble the format of art as therapy and also to differentiate it from more structured art therapy groups. Nonetheless, at the end of each session, they briefly viewed everyone's artworks and made comments if they had wished, as desired by the groups. Also at the very end of all six sessions, the groups naturally ended by looking at the images and making comments about their experiences in the groups. After the six weekly sessions, post-test of STAI: Y-6 item, EPDS and PSS were administered.

Family Club

To serve as another control group, 15 mothers from a pre-existing family club were recruited on site. Typically these neighborhood family clubs last for about two hours, but mothers and infants freely come and leave. The particular site in which this study took place, was an open living room-style place, which was open from 9:30 a.m. to 3 p.m., four days a week. Like other common neighborhood clubs, the setting included toys and books for babies and small children, and coffee and small snacks for mothers. There were no guided activities, however, there were volunteers who welcomed and interacted with the babies and mothers, and offered assistance if needed. The participants were encouraged to visit the site once a week and stay for one and a half hours. After six weeks, the author visited the site to administer post-tests.

Table 1. Weekly Themes of the Groups

	Art Therapy Groups		Open Studio Art Groups		Family Clubs
	1	2	1	2	
Week 1	Childbirth Experience	Childbirth Experience	Free theme	Inspiration from old photos / Free choice	No art
Week 2	Mothers' Changed Role	Mothers' Mood and Feelings	Free theme	Inspiration from art books / Free choice	No art
Week 3	Mothers' Mood	Mothers' Role and Identity	Free theme	Working with two colors and their mixture / Free choice	No art
Week 4	Mother-child Relationship	Mother-Child Relationship	Free theme	Combining techniques of drawing and painting / Free choice	No art
Week 5	Challenges and Joy of Motherhood	Challenges and Joy of Motherhood	Free theme	Self-portrait / Free choice	No art

Week 6	Mothers' Identity (Past, Present and Future)	Mothers' Wellbeing	Free theme	Home or House / Free choice	No art

Duration

All groups met once a week for six weeks. This duration is close to a short-term art therapy intervention, and short enough to reduce the possibility of the seasonal effect on mood, as it may be an important factor given the geographical location of the study taking place. It was also an attempt to minimize the effect of the natural progression of parenting experience as infants grow to be more independent toddlers.

Data Analysis

First, repeated-measures MANOVA was used to test the hypothesis. Then, a set of repeated measures ANOVAs was conducted to compare the three groups in the changes from pre-tests to post-tests with each measurement (STAI: Y-6 item, EPDS and PSS).

Chapter III

Results

Table 2. Descriptive Statistics of the Measured Scores

	Group	Mean	Standard deviation	N
STAI:	Art therapy	33.5714	9.28755	14
Y-6	Art	30.1883	8.28167	18
item	Control	31.7780	8.24873	15
	Total	31.7034	8.50851	47
EPDS	Art therapy	4.43	3.694	14
	Art	4.50	3.666	18
	Control	6.27	4.383	15
	Total	5.04	3.923	47
PSS	Art therapy	33.29	6.866	14
	Art	30.89	6.799	18
	Control	31.73	5.982	15
	Total	31.87	6.503	47

The aim was to recruit 60 mothers (20 mothers for each group), however, due to lack of sign up and attrition, a total of 47 primiparas from the greater Helsinki region participated in the study. The participants were divided among the three groups, art therapy group (n = 14), open studio art group (n = 18), and family club (n = 15). The

babies of the participants ranged from two to 11 months olds and all were their first and only child.

The scores of pre-tests and post-tests of the three groups, measuring postpartum depression, state of anxiety and parental stress, were compared by repeated measures MANOVA. No significant differences in mean vectors were observed among the scores of STAI: Y-6 item, EPDS and PSS, across art therapy, studio art and control groups (Λ = 0.77, F (6, 82) = 1.92, p = .09, η_p^2 = 0.12).

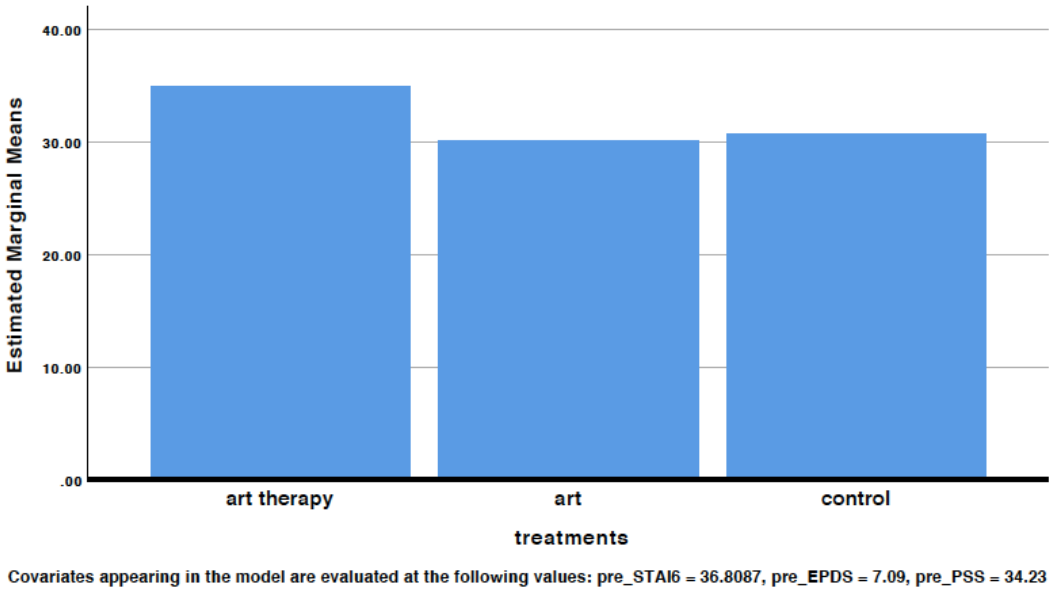


Figure 1. Estimated Marginal Means of Post-test (STAI: Y-6 item)

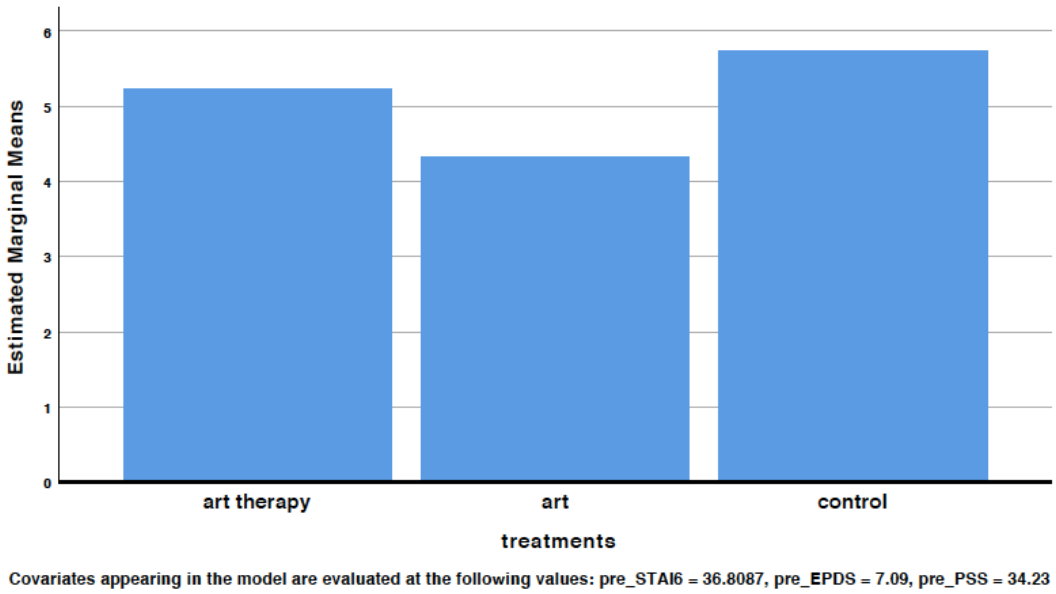


Figure 2. Estimated Marginal Means of Post-test (EDPS)

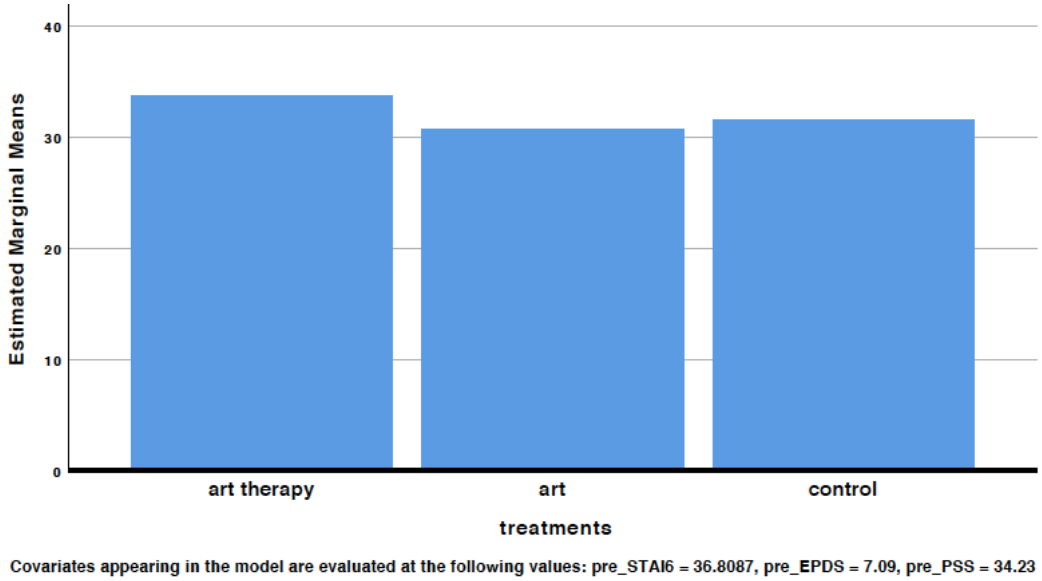


Figure 3. Estimated Marginal Means of Post-test (PSS)

In a follow-up set of repeated measures ANOVAs for each measurement (STAI: Y-6 item, EPDS and PSS), no mean differences across the three groups were found (EPDS, p = .38; STAI: Y-6 item, p = .19; PSS, p = .32). However, there was a trend in the open studio art group for greater improvement or lower scores in the measured levels of all three scores (Figure 1, 2 and 3).

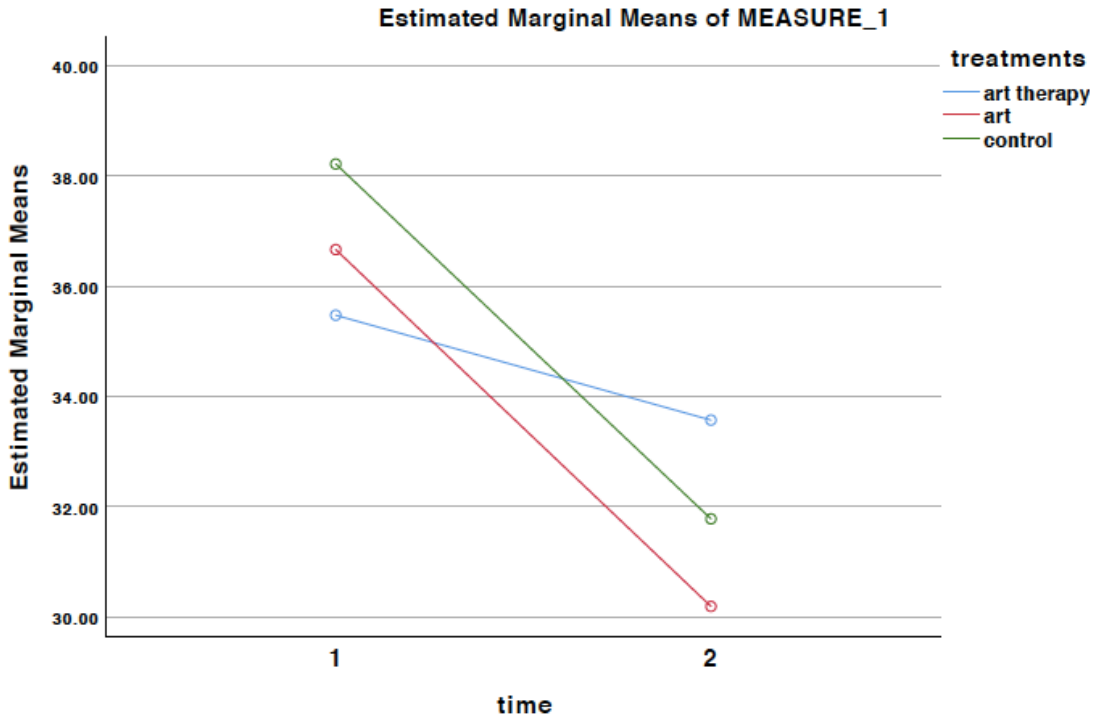


Figure 4. Estimated Marginal Means of STAI: Y-6 item

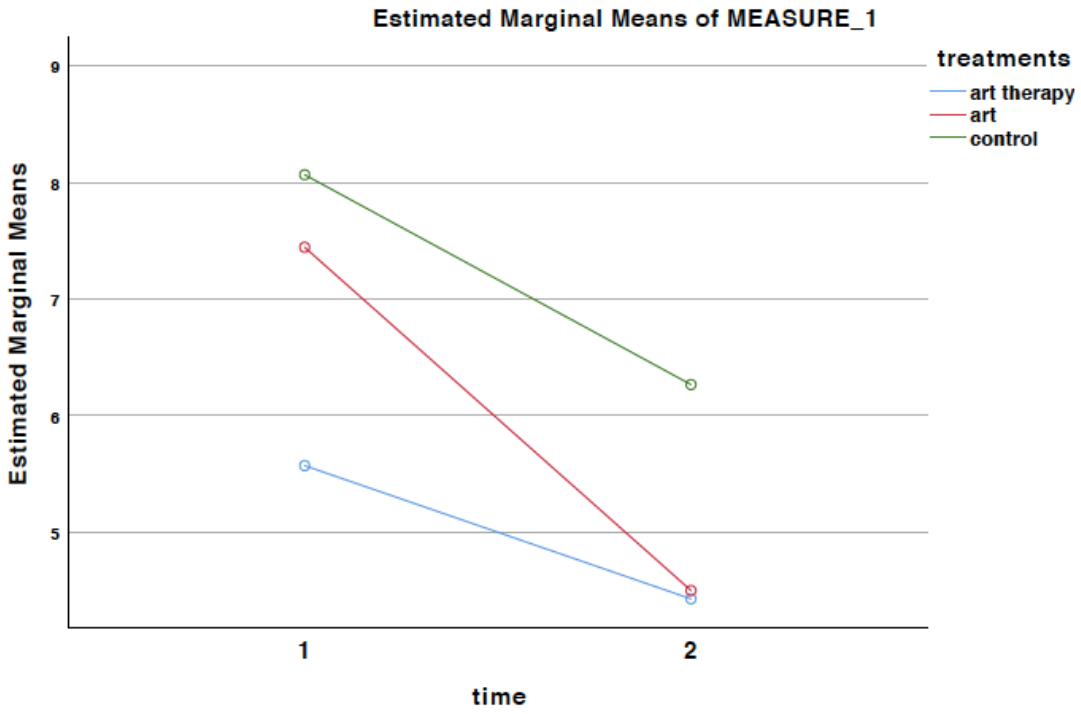


Figure 5. Estimated Marginal Means of EPDS

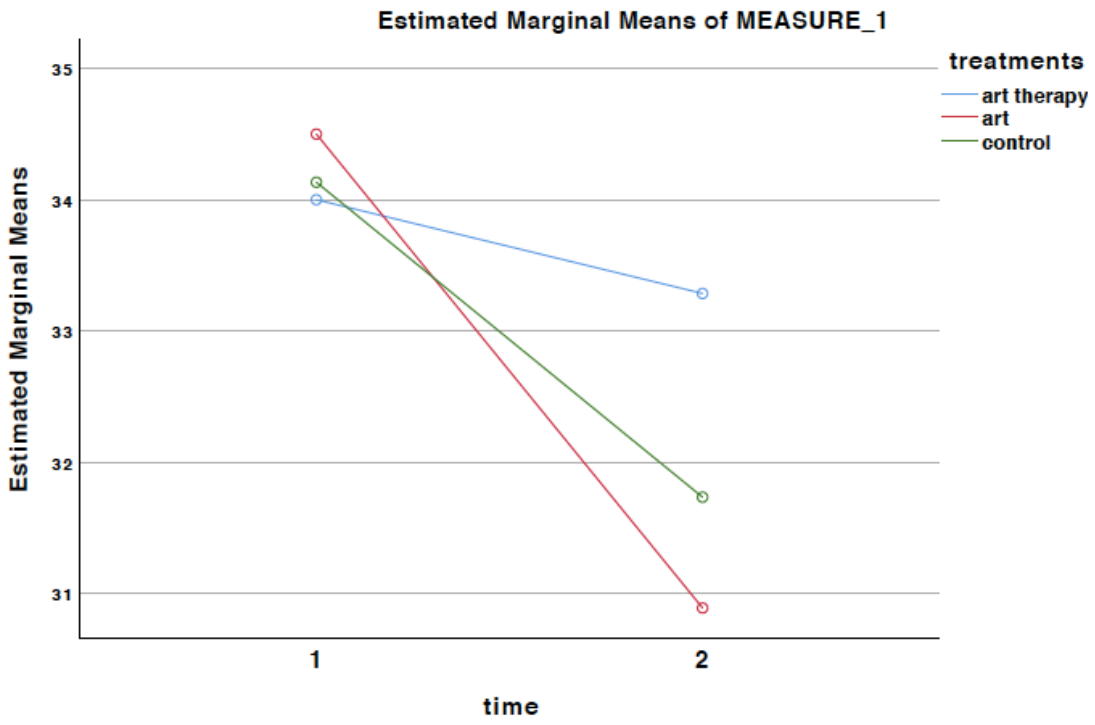


Figure 6. Estimated Marginal Means of PSS

Chapter IV

Discussion

This study examined whether an art therapy intervention can assist healthy first-time mothers to cope better with stress, anxiety and depression while caring for their infant. It was hypothesized that after six weeks of intervention, the participants in the art therapy group would have lower levels of anxiety, depression and parental stress than those in the two control groups (the open studio art group and family club). The results did not support the hypothesized differences in changes of levels of anxiety, depression and parental stress between the art therapy group and the two control groups. There were no between groups differences observed in any of the three groups compared with any other.

A trend towards improvements in the levels of anxiety, depression and parental stress was observed in open studio art group participants. This suggests that, for mothers who are well, engaging in a meaningful activity accompanied by their babies, which is centered around mothers, may be beneficial. This may suggest that prevention versus treatment for postpartum disturbances may necessitate different approaches. Supporting this suggestion, one of the open studio art groups decided to continue meeting to make art together after the research protocol was completed. The mothers in this group expressed a need to allow mothers to feel and express inadequacy in their new role, and a need for healthy support to tackle challenges for mothers.

Despite the lack of quantitative changes in anxiety, depression, or stress scores, many participants in the art therapy group expressed their gratitude at having an opportunity to discuss complications of mothering and stated that the group helped them

cope better. Additionally, one participant in the open studio art group withdrew from the study, because the issues dealt with in the art therapy group were not discussed. Without the researchers' awareness, this particular mother had heard about the art therapy group that had gathered earlier at a different site, and had enrolled in the research hoping to get to participate in an art therapy group.

One explanation for the finding that the open studio art making group improved more than the art therapy group may be reflected in the notes by the facilitators of art therapy groups. They reported sensing that the group openly discussed issues of motherhood guided by the themes, however, mostly physical issues, such as lack of sleep and biological concerns about their babies, were readily brought up. One of the facilitators also noted that at times, participants did not seem to fully relate to some of the more abstract themes that were used as prompts for art-making, as mothering for such small babies was often very physically focused.

In the open studio art group, instead of directly dealing with issues around motherhood, the leaders focused on formal qualities of art making, such as artistic themes, materials and techniques. However, during their art making, mothers conversed with each other, and the conversations they had mostly centered on topics relating to babies and motherhood, focusing mainly on physical aspects of caregiving, such as feeding, digestion and sleep. These topics also emerged afterwards while they discussed artworks that they had made, along with comments on the visual qualities of the art. Although mothers seemed to desire a place and time to openly discuss their experiences of new motherhood, for healthy mothers, whether such intervention promotes wellbeing,

as defined by lower levels of anxiety, depression and stress is questionable, especially when the themes in question are distressing.

As art therapy research with randomized clinical trials is growing yet limited, this study adds to the studies in the field of art therapy. Furthermore, this study raises questions about how motherhood is perceived in society. Some participants joined forces to open up such opportunities to the wider population to create art and share thoughts on motherhood together. Currently in the greater Helsinki area, there are numerous activities mothers can attend with babies; however, little is organized with a focus on mothers rather than babies. This study opens up an important discussion on the awareness, importance and acceptance of challenges ordinary first-time mothers experience, and support for their wellbeing.

Limitations and Future Directions

There may have been a slight blur between the art therapy and open studio art groups, especially in the art group where themes were given. One mother in the open studio art group mistakenly thought that she was enrolled in the art therapy group. She informed me about her absence from the art therapy group, although, in fact, she was in the art group. It is not clear what placebo effect there might have been for participants who believed that they were in the art therapy instead of the art group.

This study also used a convenience sample, and therefore, caution needs to be exercised when generalizing to the larger population. A bigger sample with more diverse facilitators and participants would be desirable to increase the power of the analysis and its generalizability.

Although the result did not support the hypothesis, it allows for many possible future explorations for the effectiveness of art therapy and art. Studies comparing healthy primiparas with those with high-risk or postpartum mood disorders could investigate whether art therapy intervention may be more effective as a treatment rather than as prevention against negative affect and stress among new mothers. As noted by both art therapists who facilitated the art therapy group, the six-week term might not have been long enough for the participants to explore their challenges sufficiently, and hence, an investigation of a longer period of art therapy with measurements at multiple junctures may yield beneficial findings. Perhaps directing mothers to deal with issues around motherhood may have stirred anxiety and distress; however, it may be effective in other areas beside affect and stress, such as self-esteem, competency, adjustment to motherhood, meaning in life and life satisfaction. Thus collecting data on other measurements may be instrumental as well.

Appendix 1.

Spielberger State-Trait Anxiety Inventory (STAI: Y-6 item)

Code …….. Date ……

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

	Not at all	**Somewhat**	**Moderately**	**Very much**
I feel calm	1	2	3	4
I am tense	1	2	3	4
I feel upset	1	2	3	4
I am relaxed	1	2	3	4
I feel content	1	2	3	4

I am worried	1	2	3	4

Marteau, T. M., & Bekker, H. (1992). The development of a six-item short-form of the state scale of the Spielberger State-Trait Anxiety Inventory (STAI). *British Journal of Clinical Psychology.* 1992;31:301-306.

Appendix 2.

Spielberger State-Trait Anxiety Inventory (STAI: Y-6 item, Finnish)

Koodi …….. Päiväys ……

Alla on joukko väittämiä, joita ihmiset ovat käyttäneet kuvaillessaan itseään. Lue väittämät ja ympyröi sen jälkeen kunkin väittämän oikealla puolella olevista numeroista vaihtoehto, joka kuvaa parhaiten **tämänhetkistä tunnetilaasi.** Oikeita tai vääriä vastauksia ei ole. Älä käytä liikaa aikaa yksittäisten väittämien pohtimiseen, vaan valitse vastaus, joka tuntuu kuvaavan tämänhetkistä tunnetilaasi parhaiten.

	En ollenkaan	**Jonkin verran**	**Melko paljon**	**Erittäin paljon**
Olen rauhallinen	1	2	3	4
Olen jännittynyt	1	2	3	4
Olen allapäin	1	2	3	4
Olen rentoutunut	1	2	3	4

Olen tyytyväinen	1	2	3	4
Olen huolestunut	1	2	3	4

Marteau, T. M., & Bekker, H. (1992). The development of a six-item short-form of the state scale of the Spielberger State-Trait Anxiety Inventory (STAI). *British Journal of Clinical Psychology.* 1992;31:301-306.

Appendix 3.

Edinburgh Postnatal Depression Scale (EPDS)

Code_____Date_____

As you have recently had a baby, we would like to know how you are feeling. Pleas UNDERLINE the answer which comes closest to how you have felt IN THE PAST 7 DAYS, not just how you feel today.

In the past 7 days:

1. I have been able to laugh and see the funny side of things

- As much as I always could
- Not quite so much now
- Definitely not so much now
- Not at all

2. I have looked forward with enjoyment to things

- As much as I ever did
- Rather less than I used to
- Definitely less than I used to
- Hardly at all

3. I have blamed myself unnecessarily when things went wrong

- Yes, most of the time
- Yes, some of the time
- Not very often
- No, never

4. I have been anxious or worried for no good reason

- No, not at all
- Hardly ever
- Yes, sometimes
- Yes, very often

5. I have felt scared or panicky for no very good reason

- Yes, quite a lot
- Yes, sometimes
- No, not much
- No, not at all

6. Things have been getting on top of me

- Yes, most of the time I haven't been able to cope at all
- Yes, sometimes I haven't been coping as well as usual
- No, most of the time I have coped quite well
- No, have been coping as well as ever

7. I have been so unhappy that I have had difficulty sleeping

- Yes, most of the time
- Yes, sometimes
- Not very often
- No, not at all

8. I have felt sad or miserable

- Yes, most of the time
- Yes, quite often
- Not very often
- No, not at all

9. I have been so unhappy that I have been crying

- Yes, most of the time

- Yes, quite often
- Only occasionally
- No, never

10. The thought of harming myself has occurred to me

- Yes, quite often
- Sometimes
- Hardly ever
- Never

J. L. Cox, J.M. Holden, R. Sagovsky, British Journal of Psychiatry (1987), 150, 782-786.

Appendix 4.

Edinburgh Postnatal Depression Scale (EPDS, Finnish)

Koodi_____ Päiväys _____

Ole hyvä ja ympyröi vaihtoehto, joka parhaiten vastaa Sinun tuntemuksiasi viimeisen kuluneen viikon aikana, ei vain tämänhetkisiä tuntemuksiasi.

Viimeisten seitsemän päivän aikana

1. olen pystynyt nauramaan ja näkemään asioiden hauskan puolen

• yhtä paljon kuin aina ennenkin
• en aivan yhtä paljon kuin ennen
• selvästi vähemmän kuin ennen
• en ollenkaan

2. olen odotellut mielihyvällä tulevia tapahtumia

• yhtä paljon kuin aina ennenkin
• hiukan vähemmän kuin aikaisemmin
• selvästi vähemmän kuin aikaisemmin

• tuskin lainkaan

3. olen syyttänyt tarpeettomasti itseäni, kun asiat ovat menneet vikaan

• kyllä, useimmiten

• kyllä, joskus

• en kovin usein

• en koskaan

4. olen ollut ahdistunut tai huolestunut ilman selvää syytä

• ei, en ollenkaan

• tuskin koskaan

• kyllä, joskus

• kyllä, hyvin usein

5. olen ollut peloissani tai hädissäni ilman erityistä selvää syytä

• kyllä, aika paljon

• kyllä, joskus

• ei, en paljonkaan

• ei, en ollenkaan

6. asiat kasautuvat päälleni

• kyllä, useimmiten en ole pystynyt selviytymään niistä ollenkaan

• kyllä, toisinaan en ole selviytynyt niistä yhtä hyvin kuin tavallisesti

• ei, useimmiten olen selviytynyt melko hyvin

• ei, olen selviytynyt niistä yhtä hyvin kuin aina ennenkin

7. olen ollut niin onneton, että minulla on ollut univaikeuksia

• kyllä, useimmiten

• kyllä, toisinaan

• ei, en kovin usein

• ei, en ollenkaan

8. olen tuntenut oloni surulliseksi tai kurjaksi

• kyllä, useimmiten

• kyllä, melko usein

• en kovin usein

• ei, en ollenkaan

9. olen ollut niin onneton, että olen itkeskellyt

• kyllä, useimmiten

• kyllä, melko usein

• vain silloin tällöin

• ei, en koskaan

10. ajatus itseni vahingoittamisesta on tullut mieleeni

• kyllä, melko usein

• joskus

• tuskin koskaan

• ei koskaan

Alkuperäinen lähde:

Cox JL, Holden JM, Sagovsky R. Detection of Postnatal Depression. Development of the 10-item Edinburgh Postnatal Depression Scale. British Journal of Psychiatry 1987; 150:782-6.

Appendix 5.

Parental Stress Scale (PSS)

Code_____Date_____

The following statements describe feelings and perceptions about the experience of being a parent. Think of each of the items in terms of how your relationship with your child or children typically is. Please indicate the degree to which you agree or disagree with the following items by placing the appropriate number in the space provided.

1 = Strongly disagree 2 = Disagree 3 = Undecided 4 = Agree 5 = Strongly agree

1	I am happy in my role as a parent	
2	There is little or nothing I wouldn't do for my child(ren) if it was necessary.	
3	Caring for my child(ren) sometimes takes more time and energy than I have to give.	
4	I sometimes worry whether I am doing enough for my child(ren).	
5	I feel close to my child(ren).	
6	I enjoy spending time with my child(ren).	
7	My child(ren) is an important source of affection for me.	
8	Having child(ren) gives me a more certain and optimistic view for the	

	future.	
9	The major source of stress in my life is my child(ren).	
10	Having child(ren) leaves little time and flexibility in my life.	
11	Having child(ren) has been a financial burden.	
12	It is difficult to balance different responsibilities because of my child(ren).	
13	The behaviour of my child(ren) is often embarrassing or stressful to me.	
14	If I had it to do over again, I might decide not to have child(ren).	
15	I feel overwhelmed by the responsibility of being a parent.	
16	Having child(ren) has meant having too few choices and too little control over my life.	
17	I am satisfied as a parent	
18	I find my child(ren) enjoyable	

Berry, JD, & Jones, W,H, (1995) The Parental Stress Scale : initial psychometric evidence. Journal of Social and Personal Relationships, 12, 463 – 472.

Appendix 6.

Parental Stress Scale (PSS, Finnish)

Koodi_____ Päiväys _____

Seuraavat väittämät kuvaavat vanhempana olemisen kokemukseen liittyviä tunteita ja käsityksiä. Ajattele jokaista väittämää siltä kannalta, millainen suhteesi lapseesi tai lapsiisi tyypillisesti on. Ilmoita missä määrin olet samaa tai eri mieltä seuraavien väittämien kanssa merkitsemällä valintaasi vastaava numero sille varattuun kohtaan.

1 = Täysin eri mieltä 2 = Eri mieltä 3 = En osaa sanoa 4 = Samaa mieltä 5 = Täysin samaa mieltä

1	Olen onnellinen roolissani vanhempana.	
2	Tekisin lapseni (lasteni) eteen (lähes) mitä tahansa, jos se olisi tarpeellista.	
3	Lapsestani (lapsistani) huolehtiminen vie joskus enemmän aikaa ja energiaa kuin minulla on annettavana.	
4	Olen joskus huolissani siitä, teenkö riittävästi lapseni (lasteni) eteen.	
5	Tunnen läheisyyttä lapseeni (lapsiini).	
6	Nautin lapseni (lasteni) kanssa viettämästäni ajasta.	

7	Lapseni on (ovat) merkittävä kiintymyksen lähde minulle.	
8	Lapseni (lasteni) olemassaolo saa minut suhtautumaan tulevaisuuteen varmemmin ja optimistisemmin.	
9	Lapseni on (ovat) pääasiallinen stressin lähde elämässäni.	
10	Lapsen (lapset) saatuani elämässäni ei ole juurikaan aikaa eikä joustavuutta.	
11	Lapsen (lasten) saaminen on ollut taloudellinen taakka.	
12	On vaikeaa löytää tasapaino eri vastuiden välillä lapseni (lasteni) vuoksi.	
13	Lapseni (lasteni) käyttäytyminen on usein kiusallista tai stressaavaa minulle.	
14	Jos voisin päättää uudestaan, saattaisin päättää olla saamatta lasta (lapsia).	
15	Minusta tuntuu, että vanhemmuuden vastuu hukuttaa minut.	
16	Lapsen (lapset) saatuani minulla on liian vähän vaihtoehtoja ja liian vähän vaikutusvaltaa omaan elämääni.	
17	Olen tyytyväinen vanhempana.	
18	Lapseni (lasteni) kanssa oleminen on miellyttävää.	

Berry, JD, & Jones, W,H, (1995) The Parental Stress Scale : initial psychometric evidence. Journal of Social and Personal Relationships, 12, 463 – 472

References

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). http://dx.doi.org.ezp-prod1.hul.harvard.edu/10.1176/appi.books.9780890425596

Barnes, L. L., Harp, D., & Jung, W. S. (2002). Reliability generalization of scores on the Spielberger state-trait anxiety inventory. *Educational and Psychological Measurement*, *62*(4), 603-618.

Barrett, J., Wonch, K. E., Gonzalez, A., Ali, N., Steiner, M., Hall, G. B., & Fleming, A. S. (2012). Maternal affect and quality of parenting experiences are related to amygdala response to infant faces. *Social neuroscience*, *7*(3), 252-268.

Beck, C. T. (2001). Predictors of postpartum depression: an update. *Nursing research*, *50*(5), 275-285.

Brooker, R. J., Davidson, R. J., & Goldsmith, H. H. (2016). Maternal negative affect during infancy is linked to disrupted patterns of diurnal cortisol and alpha asymmetry across contexts during childhood. *Journal of experimental child psychology*, *142*, 274-290

Cohen, L. S., Viguera, A. C., Bouffard, S. M., Nonacs, R. M., Morabito, C., & Ablon, J. S. (2001). Venlafaxine in the treatment of postpartum depression. *The Journal of clinical psychiatry*, *62*(8), 592-596.

Cohen, S., Kamarck, T., & Mermelstein, R. (1994). Perceived stress scale. *Measuring stress: A guide for health and social scientists*.

Cox, J. L., Holden, J. M., & Sagovsky, R. (1987). Detection of postnatal depression. Development of the 10-item Edinburgh Postnatal Depression Scale. *The British journal of psychiatry*, *150*(6), 782-786.

Cuijpers, P., Brännmark, J. G., & van Straten, A. (2008). Psychological treatment of postpartum depression: a meta‐analysis. *Journal of clinical psychology*, *64*(1), 103-118.

Curry, N. A., & Kasser, T. (2005). Can coloring mandalas reduce anxiety?. *Art Therapy*, *22*(2), 81-85.

De Petrillo, L., & Winner, E. (2005). Does art improve mood? A test of a key assumption underlying art therapy. *Art Therapy*, *22*(4), 205-212.

Dennis, C. L. (2005). Psychosocial and psychological interventions for prevention of postnatal depression: systematic review. *Bmj*, *331*(7507), 15.

Dennis, C. L., & Chung‐Lee, L. (2006). Postpartum depression help‐seeking barriers and maternal treatment preferences: A qualitative systematic review. *Birth*, *33*(4), 323-331.

Essex, M. J., Klein, M. H., Cho, E., & Kalin, N. H. (2002). Maternal stress beginning in infancy may sensitize children to later stress exposure: effects on cortisol and behavior. *Biological psychiatry*, *52*(8), 776-784.

Field, W., & Kruger, C. (2008). The effect of an art psychotherapy intervention on levels of depression and health locus of control orientations experienced by black women living with HIV. *South African Journal of Psychology*, *38*(3), 467-478.

Gantt, L. (2004). The case for formal art therapy assessments. *Art therapy*, *21*(1), 18-29.

Gantt, L. M., & Anderson, F. (2009). The formal elements art therapy scale: A measurement system for global variables in art. *Art Therapy*, *26*(3), 124-129.

Gavin, N. I., Gaynes, B. N., Lohr, K. N., Meltzer-Brody, S., Gartlehner, G., & Swinson, T. (2005). Perinatal depression: a systematic review of prevalence and incidence. *Obstetrics & Gynecology*, *106*(5, Part 1), 1071-1083.

Goodman, S. H., Rouse, M. H., Connell, A. M., Broth, M. R., Hall, C. M., & Heyward, D. (2011). Maternal depression and child psychopathology: A meta-analytic review. *Clinical child and family psychology review*, *14*(1), 1-27.

Hiltunen, P. (2003). Maternal postnatal depression: causes and consequences. *International journal of circumpolar health*, *62*(3), 308-309.

Julian, L. J. (2011). Measures of anxiety: State‐Trait Anxiety Inventory (STAI), Beck Anxiety Inventory (BAI), and Hospital Anxiety and Depression Scale‐Anxiety (HADS‐A). *Arthritis care & research*, *63*(S11), S467-S472.

Laurent, H. K., & Ablow, J. C. (2013). A face a mother could love: depression-related maternal neural responses to infant emotion faces. *Social neuroscience*, *8*(3), 228-239.

Laurent, H. K., & Ablow, J. C. (2012). A cry in the dark: depressed mothers show reduced neural activation to their own infant's cry. *Social Cognitive and Affective Neuroscience*, *7*(2), 125-134.

Lee, S. M. (2010). The Effects of Music Therapy on Postpartum Blues and Maternal Attachment of Puerperal Women. *Journal of Korean Academy of Nursing*, *40*(1).

Liebmann, M. (1986). *Art therapy for groups: A handbook of themes and exercises*. Cambridge, MA: Brookline Books.

Lonstein, J. S. (2007). Regulation of anxiety during the postpartum period. *Frontiers in neuroendocrinology*, *28*(2-3), 115-141.

Malchiodi, C. (2007). *Art therapy sourcebook*. New York, NY: McGraw-Hill.

Marteau, T. M., & Bekker, H. (1992). The development of a six‐item short‐form of the state scale of the Spielberger State—Trait Anxiety Inventory (STAI). *British Journal of Clinical Psychology*, *31*(3), 301-306.

Matthey, S., Barnett, B., Howie, P., & Kavanagh, D. J. (2003). Diagnosing postpartum depression in mothers and fathers: whatever happened to anxiety?. *Journal of affective disorders*, *74*(2), 139-147.

Mercer, A., Warson, E., & Zhao, J. (2010). Visual journaling: an intervention to influence stress, anxiety and affect level in medical students. *The Arts in Psychotherapy*, 37, 143-148.

Milgrom, J., Gemmill, A. W., Ericksen, J., Burrows, G., Buist, A., & Reece, J. (2015). Treatment of postnatal depression with cognitive behavioural therapy, sertraline and combination therapy: A randomised controlled trial. *Australian and New Zealand journal of psychiatry*, *49*(3), 236-245.

Murphey, C., Carter, P., Price, L. R., Champion, J. D., & Nichols, F. (2017). Psychological Distress in Healthy Low-Risk First-Time Mothers during the Postpartum Period: An Exploratory Study. *Nursing research and practice*, *2017*.

Misri, S., Reebye, P., Corral, M., & Milis, L. (2004). The use of paroxetine and cognitive-behavioral therapy in postpartum depression and anxiety: a randomized controlled trial. *The Journal of clinical psychiatry*, *65*(9), 1236-1241.

Navidian, A., Sarasiyabi, A. S., & Koochakzai, M. (2017). The Effect of Home-Based Supportive-Educational Counseling on Primigravidas' Postpartum Stress. *International Journal of Women's Health and Reproduction Sciences*, *5*(2), 112-118.

O'Hara, M. W. (2009). Postpartum depression: what we know. *Journal of clinical psychology*, *65*(12), 1258-1269.

O'hara, M. W., & McCabe, J. E. (2013). Postpartum depression: current status and future directions. *Annual review of clinical psychology*, *9*, 379-407.

O'Hara, M. W., Schlechte, J. A., Lewis, D. A., & Wright, E. J. (1991). Prospective study of postpartum blues: biologic and psychosocial factors. *Archives of general psychiatry*, *48*(9), 801-806.

O'Hara, M. W., Stuart, S., Gorman, L. L., & Wenzel, A. (2000). Efficacy of interpersonal psychotherapy for postpartum depression. *Archives of general psychiatry*, *57*(11), 1039-1045.

O'hara, M. W., & Swain, A. M. (1996). Rates and risk of postpartum depression—a meta-analysis. *International review of psychiatry*, *8*(1), 37-54.

Osman, H., Saliba, M., Chaaya, M., & Naasan, G. (2014). Interventions to reduce postpartum stress in first-time mothers: a randomized-controlled trial. *BMC Women's health*, *14*(1), 125.

Ponteri, A. K. (2001). The effect of group art therapy on depressed mothers and their children. *Art Therapy*, *18*(3), 148-157.

Ranote, S., Elliott, R., Abel, K. M., Mitchell, R., Deakin, J. F. W., & Appleby, L. (2004). The neural basis of maternal responsiveness to infants: an fMRI study. *Neuroreport*, *15*(11), 1825-1829.

Reynolds, M. W., Nabors, L., & Quinlan, A. (2000). The effectiveness of art therapy: Does it work?. *Art Therapy*, *17*(3), 207-213.

Robertson, E., Grace, S., Wallington, T., & Stewart, D. E. (2004). Antenatal risk factors for postpartum depression: a synthesis of recent literature. *General hospital psychiatry*, *26*(4), 289-295.

Rockwell, P., & Dunham, M. (2006). The utility of the Formal Elements Art Therapy Scale in assessment for substance use disorder. *Art therapy*, *23*(3), 104-111.

Rubin, J. A. (Ed.). (2001). *Approaches to art therapy: Theory and technique*. Philadelphia, PA: Routledge.

Seyfried, L., & Marcus, S. (2003). Postpartum mood disorders. *International Review Of Psychiatry*, *15*(3), 231.

Shaw, E., Levitt, C., Wong, S., & Kaczorowski, J. (2006). Systematic review of the literature on postpartum care: effectiveness of postpartum support to improve maternal parenting, mental health, quality of life, and physical health. *Birth*, *33*(3), 210-220.

Slayton, S. C., D'Archer, J., & Kaplan, F. (2010). Outcome studies on the efficacy of art therapy: A review of findings. *Art Therapy*, *27*(3), 108-118.

Sockol, L. E., Epperson, C. N., & Barber, J. P. (2011). A meta-analysis of treatments for perinatal depression. *Clinical Psychology Review*, *31*(5), 839-849.

Stein, A., Craske, M. G., Lehtonen, A., Harvey, A., Savage-McGlynn, E., Davies, B., ... & Counsell, N. (2012). Maternal cognitions and mother–infant interaction in postnatal depression and generalized anxiety disorder. *Journal of abnormal psychology*, *121*(4), 795.

Stringer, D. M. (2013). Negative affect. In M. D. Gellman & J. R. Turner (Ed.), *Encyclopedia of behavioral medicine* (pp. 1303-1304). New York, NY: Springer Science+Business Media.

Talge, N. M., Neal, C., & Glover, V. (2007). Antenatal maternal stress and long-term effects on child neurodevelopment: how and why?. *Journal of Child Psychology and Psychiatry*, 48(3-4), 245-261.

Tammentie, T., Paavilainen, E., Åstedt-Kurki, P., & Tarkka, M. T. (2004). Family dynamics of postnatally depressed mothers–discrepancy between expectations and reality. *Journal of Clinical Nursing*, *13*(1), 65-74.

Tammentie, T., Tarkka, M. T., Åstedt‐Kurki, P., Paavilainen, E., & Laippala, P. (2004). Family dynamics and postnatal depression. *Journal of Psychiatric and Mental Health Nursing*, *11*(2), 141-149.

Timlin, D., & Simpson, E. E. A. (2017). A preliminary randomised control trial of the effects of Dru yoga on psychological well-being in Northern Irish first time mothers. *Midwifery*, *46*, 29-36.

Touliatos, J., Perlmutter, B. F., Strauss, M. A., & Holden, G. W. (Eds.). (2001). Handbook of family measurement techniques: Abstracts (Vol. 1). Sage.

Tseng, Y. F., Chen, C. H., & Lee, C. S. (2010). Effects of listening to music on postpartum stress and anxiety levels. *Journal of clinical nursing*, *19*(7-8), 1049-1055.

Ulman, E. (2001). Art therapy: Problems of definition. *American Journal of Art Therapy*, *40*(1), 16.

Wenzel, A., Haugen, E. N., Jackson, L. C., & Brendle, J. R. (2005). Anxiety symptoms and disorders at eight weeks postpartum. *Journal of anxiety disorders*, *19*(3), 295-311.