BEST PRACTICE NON-PHARMACOLOGICAL INTERVENTIONS FOR MOTHERS WITH POSTPARTUM DEPRESSION

KELLEY ANNE TITCHE

A Thesis Submitted to the Honors College
In Partial Fulfillment of the Bachelor’s degree
With Honors in
Nursing
THE UNIVERSITY OF ARIZONA
MAY 2021

Approved by:

Dr. Melissa Goldsmith
College of Nursing
Abstract

**Purpose:** To develop evidence-based best practice recommendations for nursing care professionals to reference when caring for postpartum women in regard to postpartum depression (PPD).

**Background:** Postpartum women are at a significant risk for developing PPD. This condition is highly undertreated and underreported and is also poorly treated with typical methods such as antidepressant medications. Integrative, non-pharmacological modalities to combat symptoms of PPD may be effective when mothers are properly educated about how to implement them.

**Approach to practice:** These best practice recommendations have been collected from a literature review conducted by searching PubMed and Google Scholar with the following keywords: “postpartum depression treatment” and “postpartum depression intervention”. The articles included in this search were published from 2015 to 2019. Nine articles were included in this literature review.

**Outcomes:** The best practice recommendations for care presented in this thesis have been compiled for nursing professionals to reference when caring for postpartum women in order to reduce symptoms of PPD. Depending on the specific intervention, some may be best implemented prior to the birth of the child, while others may be most effective in the postpartum period.

**Conclusions:** Postpartum depression is a complex condition that may plague any new mother. With the use of these best practice recommendations for care of postpartum mothers, PPD symptoms may be reduced, providing for a better quality of life for both the mother and her child.
CHAPTER 1

The purpose of this thesis is to review current evidence-based literature regarding the prevalence and treatment of postpartum depression. It will also include the formulation of evidence-based nursing practice recommendations for mothers with postpartum depression so that, in most cases, this condition can be treated with non-pharmacologic interventions that improve outcomes. These best practice recommendations seek to emphasize the effectiveness of integrative nursing practice strategies in treating postpartum depression. Prioritizing less invasive strategies for care, such as non-pharmacological interventions, over more invasive pharmacological interventions, allows the nurse to follow integrative nursing principles to choose the least invasive treatment option that is appropriate for the patient’s condition.

Background of Postpartum Depression

Postpartum depression is recognized as an issue plaguing new mothers and affecting their ability to form a healthy relationship with their baby. McKinney, James, Murray, Nelson, and Ashwill (2018) define postpartum depression as a period of depression occurring after childbirth and lasting at least two weeks. Postpartum depression can be diagnosed at any point in the first year postpartum, but diagnosis often occurs in the first one to three weeks after delivery (American College of Obstetricians and Gynecologists, 2019). There are also common characteristics of postpartum depression and a postpartum mother must meet four of them to be diagnosed. These characteristics include appetite changes, weight changes, lack of energy, feelings of worthlessness and guilt, changes in sleep, changes in psychomotor activity, difficulty thinking or concentrating, and recurrent thoughts of death or suicide. Typically, women will develop postpartum depression within the first three months after giving birth, but it can still occur within the first year of their child’s life (McKinney et al., 2018).
Postpartum depression affects approximately 13-19% of mothers who have recently given birth and even more severely affects those with pre-existing depression (Lewis et al., 2018). This condition does not discriminate by race, religion, or socioeconomic status, but affects all populations equally. Postpartum women make up a large portion of the general population, and as each of these women are susceptible to developing postpartum depression, it is crucial that best practice evidence-based recommendations for care are in place to guide nurses in providing patient care.

Though postpartum depression affects such a significant portion of the postpartum population, it is greatly underreported and undertreated. Because of the severe and often embarrassing changes a woman undergoes when she develops this condition, she may feel ashamed seeking treatment or may feel like she is an inadequate mother. A mother with postpartum depression may be unable to feel normal emotions such as love or joy when taking care of her child. Women with postpartum depression may feel unqualified to care for a fragile being like a newborn. Postpartum depression may be associated with loss of interest in things individuals were once passionate about, including family and career. This dramatic personality and behavior shift can cause extreme strain on the family, causing the partner or other family members to distance themselves from the mother in an attempt to avoid experiencing the severe symptoms she exhibits as a consequence of her condition. The partner may also feel as though they no longer know the mother since her behaviors and moods have changed immensely. This can be detrimental to the new mother’s healing process and to the relationship. Infants may also feel the impact of the mother’s condition. Mothers may be more tense, less nurturing, and disinterested in the child which interferes with forming the precious maternal-child bond. Symptoms that disrupt the mother’s ability to care for the infant can lead to safety issues such as
the mother not learning about safe sleep or feeding practices that are crucial to the wellbeing of her child (McKinney et al., 2018). Overall, postpartum depression can be a detrimental condition to every aspect of a mother’s life as it can also impact her relationships with her family and newborn child (van der Zee-van den Berg, Boere-Boonekamp, Groothuis-Oudshoorn, IJzerman, Haasnoot-Smalegange, and Reijneveld, 2017). As postpartum depression is often undetected and symptoms commonly go untreated, there is a great need for more research and evidence-based recommendations for care of mothers who are diagnosed with this condition. Common treatments for depression, such as antidepressant medications, are often ineffective in reducing the symptom severity of postpartum depression (Lewis et al., 2018). Selective serotonin reuptake inhibitors such as fluoxetine (Prozac) are common antidepressant medications, but they are deemed unsafe during pregnancy and lactation due to the risk for drug transmission to the child and adverse effects that can even include worsening of the existing depression (Micromedex, 2020). In severe cases of PPD, these medications may be necessary, but in milder cases, nonpharmacological treatments may be more beneficial or preferred. Because of this gap in best practice knowledge, recommendations should be formulated to better treat this condition in the future. The research discussed in the following chapters seeks to compile improved evidence-based recommendations for treating these mothers, so they are able to maintain their normal lifestyles and foster a strong, lasting bond with their child.

**Significance to Nursing Practice**

The information presented in this thesis is integral to developing best practice evidence-based recommendations for care of postpartum patients. Mothers are often so overwhelmed by their new role as a parent that their own mental health comes second to their responsibility to take care of their child. They are typically unable to recognize depressive symptoms and changes
in behavior for themselves unless prompted, so it is important for nurses to know how to detect and measure postpartum depression. Through the use of various postpartum depression scales used in the research article clinical experiments analyzed in this literature review, nurses can accurately measure the severity of a patient’s postpartum depression. These scales, such as the Edinburgh Postnatal Depression Scale, are currently used in clinical practice to detect the presence of postpartum depression, and therefore are strong measurement methods to detect the efficacy of the various research treatments. Ultimately, this topic and thesis are extremely significant to nursing practice because it is the nurse’s responsibility to advocate for the patient. Without the voice of the nurse in support of the patient, this severe medical issue may never be noticed or properly treated. Postpartum depression is very prevalent in this population and must be addressed when it is assessed. If the nurse is aware of postpartum depressive symptoms and is able to accurately assess the patient using proper assessment tools, best practice recommendations may be implemented to treat postpartum depressive symptoms.

Statement of Purpose

This thesis will consist of an analysis of research studies conducted on the topic of non-pharmacological interventions for reducing symptoms of postpartum depression. Each of these studies focused on interventions to reduce the severity and incidence of postpartum depression. Finally, this thesis will synthesize the results of the studies into an evidence-based practice recommendation that can be applied to clinical nursing practice. It is important to understand how healthcare professionals manage and treat symptoms of postpartum depression in new mothers because this condition can greatly impact the relationship they have with their child. By providing the healthcare community with evidence-based recommendations to care for women
experiencing postpartum depression, the highest level of care will be available to patients to manage symptoms associated with postpartum depression.
CHAPTER 2

Review of Literature

Chapter two will focus on a review of recent clinical research that supports various interventions to treat postpartum depression. The literature review research was guided by the following PICOT question: In postpartum mothers, can non-pharmacologic interventions, compared to no intervention or a placebo, affect symptoms of postpartum depression? These non-pharmacological interventions range from exercise routines to parenting educational materials. An extensive literature search was performed to select the research studies used in this review. The primary databases used to search for the literature were PubMed and Google Scholar, and various filters were applied to the search, restricting results to clinical trial articles published in the last five years. Originally, the search only included articles published in nursing journals, but was later expanded to include various types of medical journals, as these also offer a valuable perspective on the treatment of postpartum depression. Search terms used to locate these articles included “postpartum depression treatment” and “postpartum depression intervention”. Through the use of these criteria to search the PubMed and Google Scholar databases, an extensive literature collection was selected.

The literature reviewed focuses on non-pharmacological interventions that can potentially be used in clinical practice to reduce the severity of postpartum depression symptoms or to prevent mothers from suffering from postpartum depression at all. Following this literature review, the findings from these studies were compiled into best practice recommendations in chapter three.

Non-Pharmacological Interventions for Postpartum Depression

Diet-Based Interventions
In a quantitative clinical trial performed by Chang and Chen (2016), the researchers aimed to discover how chamomile tea can affect postpartum depression, including sleep quality and fatigue. Sleep, fatigue, and depression often worsen after a woman gives birth to her baby, and these symptoms can be detrimental to the health of a new mother. This study used a randomized controlled trial that was single blind, meaning the participants did not know if they were being assigned to the experimental or control group. The sample size consisted of 80 Taiwanese women with poor sleep quality who were in their 6th week postpartum. The sample size, which began at 80, was determined by a power analysis. The sample was taken from a hospital in southern Taiwan, including women who had a normal childbirth and did not report any allergies to herbal teas. The study was designed to have participants complete pretests prior to treatment in order to have baseline values to which the results could be compared. After the intervention, participants would then complete post-tests in order to obtain results regarding the effectiveness of the intervention. The sample was randomly assigned to either the experimental group, in which subjects drank one cup of chamomile tea once daily for two weeks, or the control group, which was only provided basic postpartum care and drank no tea. In order to measure the findings, researchers used three tests: the Postpartum Sleep Quality Scale (PSQS), the Edinburgh Postnatal Depression Scale (EPDS), and the Postpartum Fatigue Scale (PFS). These were the three tests administered prior to the treatment as well as for the post-test measurements after the treatment was over. Two sample t-tests were performed in order to examine differences between the experimental and control groups, and the pretest scores for all three data collection tests displayed results that were similar for both groups. The results of this experiment showed that there were significant improvements in sleep efficiency and depression symptoms for the experimental group, which had consumed chamomile tea for two weeks.
Compared to the control group, it was concluded that drinking chamomile tea has significant and positive effects on the mental health of postnatal women. Regarding the PSQS post-test, a t-value of -2.482 was shown with a p-value of 0.015. For the EPDS test, a t-value of -2.372 was shown with a p-value of 0.020. The researchers state that these findings are statistically significant, and that chamomile tea should be suggested to postpartum women as another technique to alleviate sleeping issues or depressive symptoms. This study exhibited many strengths that support the evidence found in the results section of the article. To begin, this clinical trial was strengthened by the use of randomized sampling as well as random assignment of each participant to either the control or experimental group. It is also strengthened by the use of single-blind techniques to prevent participants from knowing which group they had been assigned. However, the researchers identified multiple weaknesses, including the use of a single-ingredient chamomile tea, meaning the results may not be consistent if postpartum mothers choose to drink a tea with other ingredients included. Secondly, the researchers did not provide the control group with a placebo tea. To improve this study for further research, a placebo tea should be included (Chang and Chen, 2016).

**Exercise-Based Interventions**

A randomized controlled trial performed by Buttner, Brock, O’Hara, and Stuart (2015) sought to determine the effectiveness of yoga therapy as a complementary therapy for postpartum depression patients. The independent variable in this study was the implementation of yoga therapy into postpartum care and the dependent variable was the incidence and severity of postpartum depression. The researchers hypothesized that women in the yoga treatment group would exhibit improved symptoms of postpartum depression more quickly than would those in a control group that did not perform yoga. This randomized controlled trial consisted of pre-test
and post-test assessments in order to measure participants’ progress throughout the study and was conducted in Iowa. The sample size was determined using a power analysis and it consisted of 57 postpartum women with scores greater than 12 on the Hamilton Depression Rating Scale (HDRS). In order for women to be eligible for this trial, they needed to live within a 30-mile radius of the yoga studio and be 6 or more weeks postpartum if their delivery was complicated or by cesarean section in order to allow them recovery time before resuming exercise; women who had an uncomplicated vaginal birth could participate prior to 6 weeks postpartum. Participants were sampled from public birth records, flyers, and a mass email sent to the University of Iowa community in order to reach any woman who met the inclusion criteria, whether she was a patient of the university hospital or a university employee. Study participants were sampled using three depression screening criteria. The Patient Health Questionnaire (PHQ-9) is a depression scale that is often effective in screening larger populations for depression symptoms. The HRDS is used to measure the severity of current depression symptoms exhibited by a patient and is important to use in this trial because it is very sensitive to changes in postpartum depression. The SCID-I assesses for major psychiatric disorders and is implemented for patients scoring higher than a 10 on the HDRS, which applies to all participants in this study. Researchers in this trial found that while depressive symptoms decreased for the entire sample over the time course of the study, the symptoms decreased more quickly in the group that participated in the yoga intervention. The time difference between the improvements in the two groups was significant, and some of the symptoms that the yoga group improved more quickly in included depression, anxiety, well-being, and health-related quality of life. The results of this trial show that approximately 78% of the participants in the yoga group experienced a statistically significant change in symptoms between their pre-test and post-test. To evidence this statistical
significance, a t-value of -2.94 and a p-value of 0.005 were reported. One strength of this study is that the clinical researchers administering the yoga treatment were blinded to the random assignment of the yoga and control groups, meaning there could be no bias in assigning participants to either group. Secondly, the yoga intervention was developed specifically for postpartum women, meaning the routine was specialized to movements that would benefit this population. One weakness of this study is that the sample size ended up being smaller than many previous trials regarding postpartum depression, so the results of this study may not be as reliable as the results from other studies. Secondly, the sample mostly consisted of white, educated, married women, which does not accurately represent the whole population of postpartum women. Because of this, the results cannot be generalized to all postpartum depression cases (Buttner, Brock, O’Hara, and Stuart, 2015).

In a randomized trial by Lewis et al. (2018), the researchers’ goal was to determine the effectiveness of exercise interventions on the symptoms of postpartum depression. The trial sought to answer the question: Does treatment with exercise and wellness interventions prevent predisposed women from developing the severe symptoms of postpartum depression? The independent variable of this research was the implementation of exercise interventions and the dependent variable was the severity of postpartum depressive symptoms. The researchers hypothesized that the lifestyle change of integrating exercise into the daily regimen would help to provide postpartum mothers with an emotional outlet and an activity that brought positivity to their life. The sample consisted of women who were anywhere from two days to eleven weeks postpartum and who had a history of depression prior to giving birth to their child. Predisposed women were included in the sample because women with a history of depression have twice the chance of developing postpartum depression than do women without previous depression. There
were also numerous exclusion criteria, including age under 18 years, participation in regular exercise prior to the study, a predisposing medical condition that would impair their ability to exercise, and current depressive or psychiatric episodes warranting current treatment. This sample was obtained through an advertisement to which participants responded and then underwent a telephone screening interview to ensure they met the inclusion criteria and consented to the trial. A power analysis was performed to determine an adequate sample size and a sample of 450 postpartum women who met the inclusion criteria were included in the trial. Participants were randomly assigned to one of three treatment groups: exercise, wellness and support, or control with no change in routine. The participants continued with the treatment assigned to them for six months and then completed various measures of depression symptoms. The main data collection tool was the Structured Clinical Diagnostic Interview (SCID), which is considered to be the gold standard for diagnosing depression and in depression treatment trials. Other assessment tools included the Edinburgh Postnatal Depression Scale (EPDS), the PHQ-9, and the Perceived Stress Scale. Some of the characteristics that these scales measured included energy level, cognitive functioning, self-esteem, mood disturbances, changes in pleasure, weight disturbances, and suicidal thought. These tools provided a numerical value that described how well the postpartum mothers’ conditions had improved and whether they had developed depressive symptoms. Using the results from these various tests, the researchers performed t-tests to determine the significance of the results. The statistical analysis showed that participants in the exercise treatment group saw lower mean depression scores than the participants in the wellness and control groups with a p-value of 0.025. The exercise group also saw the lowest mean score for the EPDS and PSS tests with respective p-values of 0.03 and 0.2. Overall, the results of this trial provided evidence that an established exercise regimen during the postpartum
period reduces the incidence and severity of postpartum depression symptoms. One strength of this trial is its randomization between three different treatment groups, with the wellness group being an intermediate between the exercise and control groups. The wellness group provided a treatment that was not as strenuous as the exercise regimen, but still provided some form of treatment as opposed to the control. One weakness of the study is that participants were recruited by responding to an advertisement sent out by the researchers, which means this is a convenience sample. Generally, people who respond to these advertisements do not entirely represent the population of postpartum mothers, and the researchers even stated that there were discrepancies in age and income in this sample. One solution to correct this potential lurking variable would be to contact all postpartum mothers on a couplet care unit in a hospital during a certain period of time to ensure that potential participants from all demographic and socioeconomic backgrounds have the opportunity to be represented in the study. Overall, this trial was well-structured and provided significant data regarding treatment of postpartum depression (Lewis et al., 2018).

In a randomized controlled trial by Aguilar-Cordero, Sánchez-Garcia, Rodriguez-Blanque, Sánchez-Lopez, and Mur-Villar (2019), the researchers aimed to discover whether moderate physical activity in an aquatic environment during the antepartum period would reduce the incidence of postpartum depression after delivery. In this study, the independent variable was a moderate physical exercise routine in an aquatic environment between 20 and 37 weeks gestation, and the dependent variable was the incidence of postpartum depression after delivery. The researchers hypothesized that the implementation of an aquatic exercise routine during pregnancy would reduce a woman’s risk of developing postpartum depression. The researchers collected participants by speaking to them at their week 12 ultrasound at various health centers across Granada, Spain. The researchers initially contacted 364 women, and the final sample size
was 129 after those who did not meet the inclusion criteria were removed. A power analysis was performed to calculate the ideal sample size for this trial. Exclusion criteria for this trial included poor attendance at exercise sessions, pregnancy less than 12 weeks or more than 20 weeks gestation, and any contraindications to aerobic exercise during pregnancy as determined by the American College of Obstetricians and Gynecologists (ACOG). The women who met the inclusion criteria were randomized into either the treatment group, who would participate in the exercise trial, or the control group, who would only receive routine education on the benefits of physical exercise during pregnancy but would not partake in a structured routine. The treatment group followed the Study of Water-based Exercise in pregnancy (SWEP) method, including a warm-up phase, the main aerobic, strength, and endurance activity phase, and a stretching and relaxation phase. The treatment group participated in three 1-hour sessions per week from 20 to 37 weeks gestation. The Edinburgh Postnatal Depression Scale (EPDS) was the primary tool used to measure postpartum depression incidence after delivery. The study participants completed the assessment between 4 and 6 weeks postpartum. The results of this trial concluded that women in the exercise treatment group scored, on average, 3.76 points lower on the EPDS, meaning that their risk of developing postpartum depression was lower. Overall, it was found that moderate aquatic physical activity during pregnancy reduces the risk of developing postpartum depression. One strength of this study was its use of randomization between the treatment and control groups, and that the women in the control group received treatment as usual by being educated on the benefits of exercise in pregnancy, instead of simply receiving no treatment at all. One weakness of this trial was that although a power analysis was used to determine ideal sample size, the study ended up with seven less participants than was determined
to be sufficient (Aguilar-Cordero, Sánchez-Garcia, Rodríguez-Blanque, Sánchez-Lopez, and Mur-Villar, 2019).

**Education and Screening-Based Interventions**

A randomized controlled trial by Werner, Gustafsson, Lee, Feng, Jiang, Desai, and Monk (2016) sought to determine whether Practical Resources for Effective Postpartum Parenting (PREPP), which assists in parenting an infant, could help to reduce the severity of postpartum depression symptoms. In this trial, the independent variable was the implementation of PREPP strategies into the couplet’s care plan and the dependent variable was the severity of postpartum depression symptoms. The researchers of this trial hypothesized that postpartum treatment with PREPP would lead to less severe or less prevalent depressive symptoms in the mother. Many trials regarding postpartum depression treatment only focus on treating the mother, but this trial is unique in that it assists the mother in learning how to care for her child so that the couplet can form a strong relationship. In doing so, this trial provides a unique perspective on postpartum depression treatment moving forward. The structure of this trial consisted of an initial assessment anytime from 34 to 38 weeks gestation to obtain consent, complete baseline assessments, and to be randomized to a treatment group. Women in the treatment group received follow-up visits to obtain their treatment over the six weeks following birth and all participants returned to the laboratory at six weeks postpartum to evaluate their progress. Follow-up evaluations were also done for all participants at ten and sixteen weeks postpartum. Fifty-four postpartum women made up the sample size for this trial and were randomized to either the treatment or the control group, though a power analysis was not stated to determine this sample size. Inclusion criteria for this trial included women 18-45 who were in their 2nd or 3rd trimester at the time of recruitment, and recruiting was done through the Columbia University Medical Center. Women
were excluded from the trial if they had a history of smoking or using drugs, were not fluent in English, were currently receiving psychiatric treatment, were taking medication, or had a complicated pregnancy. The assessment measures used to gather data were the Predictive Index of PPD, given prior to birth to assess potential risk of developing postpartum depression, the Hamilton Rating Scale for Depression (HRSD), the Patient Health Questionnaire (PHQ-9), and Baby’s Day Diary, which provided data about infant crying and fussing. After assessing all couplets using these tools at the various follow-up appointments, the researchers used SPSS software to analyze the data. The results indicate that at the beginning of the trial, prior to intervention, both randomized groups scored in the moderate depression range of the HRSD, the mild anxiety range of the HAM-A, and the mild depression range of the PHQ-9. At the 6th postpartum week, the treatment group had decreased to within the mild depression range of the HRSD while the control group still scored in the moderate depression range. By the 10th and 16th postpartum weeks, both groups had decreased within the mild depression range on the HRSD. At the 10th postpartum week, the treatment group fell within the mild depression range on the PHQ-9 while the control group had increased within the moderate depression range. The researchers determined that the women who received the PREPP treatment had a significant decrease in their depressive symptoms with a p-value of 0.01. Overall, the results supported the hypothesis that interventions such as PREPP that provide parenting education can be helpful in lowering the severity of postpartum depression. One strength of this study is that it also included an assessment measure of anxiety instead of only assessing depression. Anxiety often accompanies the symptoms of postpartum depression, so it is crucial to also measure the effectiveness of a treatment on anxiety to truly determine how well it treats the patient. One weakness of this trial is the small sample size, as no power analysis was performed to determine
an appropriate size. With a larger sample size, the results could be considered more reliable and would allow the researchers to detect any discrepancies in the data, should any be present. In conclusion, this trial was well-organized, contained randomization, and provided significant results (Werner, Gustafsson, Lee, Feng, Jiang, Desai, and Monk, 2016).

In a systematic review and meta-analysis by Scime, Gavarkovs, and Chaput (2019), the researchers reviewed eight studies found in six databases regarding the use of skin-to-skin contact to reduce the risk of postpartum depression. Through this analysis of studies, the researchers aimed to determine whether skin-to-skin contact is effective as a treatment strategy for postpartum mothers. Studies were eligible to be part of the systematic review if they were randomized controlled trials, quasi-experimental designs, or non-experimental designs published in an English peer-reviewed journal. Inclusion criteria for these studies included those that involved mothers who delivered preterm or low birthweight babies that were later admitted to the NICU, as the NICU was the location for the interventions to be performed. The studies also needed to measure postpartum depression as an outcome, using a valid depression screening tool, so that all results could be compared to each other. The researchers used CINAHL, Cochrane Library, EMBASE, MEDLINE, PsycINFO, and PubMed databases to select the trials. A meta-analysis was then conducted to convert the results found in these trials into numerical data that could later be analyzed as results. Overall, eight articles met the inclusion criteria, but two were based on the same intervention, so seven skin-to-skin interventions were studied to examine their effect on postpartum depression. A total of 643 couplets were included in the final results. Depression measurement tools used in the various studies included the Edinburgh Postnatal Depression Scale (EPDS), the General Health Questionnaire, the Center for Epidemiologic Studies Depression Scale, the Beck Depression Inventory, and the Postpartum Depression
Screening Scale. The meta-analysis results concluded that mean PPD scores in mothers who participated in skin-to-skin care decreased by 1.04%, which was statistically significant at a p-value of <0.001. Though this decrease is very small compared to no treatment at all, it does still show that skin-to-skin contact is somewhat beneficial for forming a connection between mother and baby and reducing the severity of postpartum depression symptoms. Skin-to-skin contact was shown to improve anxiety and depression by improving maternal mood and protect women against worry, sadness, and guilt as related to their baby. One strength of this systematic review was the broad search of multiple databases to locate the eight articles that were used in the analysis. By searching so many databases and closely vetting each article that could qualify, the researchers ensured they included the most significant and relevant data in the analysis. One weakness of this systematic review is that the sample size of eight was fairly small because of the niche inclusion criteria, so many trials were excluded that may have had important data but did not quite fit the topic. By expanding the inclusion criteria and being more lenient with selecting studies, future researchers could obtain a larger sample size. Overall, this systematic review and meta-analysis was well-structured and provided valuable data about the effectiveness of skin-to-skin contact on postpartum depression (Scime, Gavarkovs, and Chaput, 2019).

In a quasi-experimental trial by van der Zee-van den Berg, Boere-Boonekamp, Groothuis-Oudshoorn, IJzerman, Haasnoo-Staal, and Reijneveld (2017), the researchers aimed to discover whether postpartum depression screening can improve maternal conditions and provide a healthier environment for both mother and child. The independent variable of this trial was the presence of postpartum depression screening in the immediate postpartum period and the dependent variable was the severity of depression. The researchers hypothesized that with early screening, mothers would experience less severe depressive symptoms. As postpartum
depression is so commonly untreated, the researchers wanted to determine an intervention that could combat this lack of treatment. The trial was set at various Dutch well-child centers where mothers can bring their children in for regular assessments. At these routine appointments for the child, the mother was also screened for postpartum depression if she was in the treatment group. For the treatment group, these screenings occurred at one, three, and six months postpartum. The Edinburgh Postnatal Depression Scale (EPDS) was the tool used to screen these mothers for postpartum depression. The participants were not randomized to a treatment group but instead were allocated based on where they lived, as they all reported to different well-child centers based on location. Twenty-three centers and their clients were part of the treatment group and 19 centers and their clients made up the control group. A power analysis was performed to determine an adequate sample size, and it was decided that 1545 women were needed for each group. In order for a woman to be included in the study, she needed to be a client of one of the well-child centers and complete the EPDS form prior to the child’s 1-month visit. After gathering the data at each mother’s one, three, and six-month visits, the researchers used SPSS software to perform the data analyses. The results of the trial showed that significantly fewer mothers who received screening at their well-child visits were diagnosed with postpartum depression at nine months postpartum as compared to the control group with a p-value of 0.001. This can mainly be attributed to the fact that mothers in the treatment group who had higher EPDS scores indicative of postpartum depression sought psychological treatment during the postpartum period and were able to get help with their condition, while high-scoring mothers in the control group were unaware that they may need to seek treatment. One strength of this trial is that the sample size was very large with 1545 participants in each of the two groups and a power analysis was performed. With a large community-based sample like this one, the results of the
trial can be more generalizable to the whole population. One weakness of this trial was the quasi-experimental design as opposed to a randomized controlled design. A randomized trial was not feasible in this case, as the group assignment needed to be location-based but randomizing in a future study would assist in removing any potential bias that might exist (van der Zee-van den Berg, Boere-Boonekamp, Groothuis-Oudshoorn, IJzerman, Haasnoot-Smallegange, and Reijneveld, 2017).

A randomized controlled trial by Sanaati, Charandabi, Eslamlo, and Mirghafourvand (2018) aimed to determine whether lifestyle-based training would help prevent the development of postpartum depression in new mothers. The researchers hypothesized that by introducing participants to education regarding antepartum sleep hygiene, nutrition, physical activity, self-image, and sexual matters, postpartum depression incidence could be reduced. In this trial, the independent variable is the implementation of lifestyle-based training, and the dependent variable is the occurrence of postpartum depression. Women were recruited to participate in this trial by researchers visiting healthcare centers in Bukan, Iran, where the women received prenatal care. Inclusion criteria included literacy, absence of current depression, gestation between 24-28 weeks, uncomplicated singleton pregnancy, and an Edinburgh Postnatal Depression score of less than 12 at the beginning of the trial. A power analysis was performed to determine an adequate sample size, and it was found that three groups of 63 participants would be used. The participants were randomly assigned to the three groups, which included both women and their husbands receiving the education, only women receiving the education, and a control group with only treatment as usual and no education. For the two treatment groups, the participants attended four 60- to 90-minute sessions each week from weeks 24 to 28 and were given an educational booklet to review at home. Topics covered in the educational materials
included the anatomy of genital organs and pregnancy, sleep hygiene, nutrition, exercise, and other relevant information. The sessions included various educational topics about what to expect during pregnancy and labor, and there was time for the participants to ask questions at the end of each session. The results of this trial found that the mean postpartum depression scores after the intervention or control were 2.7 for the first experimental group (education for both the mother and husband), 4.8 for the second experimental group (education for the mother only), and 8.0 for the control group. As compared to the pre-experimental data in which all groups scored between 6.5-6.8, these results show that providing lifestyle education to both the pregnant woman and her husband allows for the biggest decrease in risk for developing postpartum depression. One strength of this trial was its inclusion of two experimental groups along with the control group to determine whether the addition of a partner was more beneficial in the prevention of postpartum depression. One limitation is that the first experimental group specifically included women and their husbands, meaning it did not include women with partners who do not identify as male or those who are not married but are still planning to raise the baby together. This means that the data from this experiment cannot be generalized to couples who do not fit the criteria used in this study (Sanaati, Charandabi, Eslamlo, and Mirghafourvand, 2018).

In a randomized controlled trial by Chan, Leung, Tiwari, Or, and Ip (2019), researchers hypothesized that the use of a smartphone app with psychoeducational interventions would be a user-friendly and affordable way to educate mothers and reduce the incidence of postpartum depression. In this trial, the independent variable was the use of the smartphone app in the antepartum period and the dependent variable was the presence of postpartum depression after delivery. Participants were recruited by attending the antenatal clinic at a specific public hospital and met the inclusion criteria if they were primiparous women at less than 24 weeks gestation.
Though no power analysis was performed, to determine sample size, there was a very large sample of 660 participants, which was split into a treatment and a control group of 330 women each. Participants were randomly assigned to either of the groups and the treatment group was introduced to the smartphone app while the control group only received treatment as usual (TAU), including normal 4-session antenatal classes instructed by nurses. The intervention consisted of implementation of the iParent app, which covered the same informational materials that were presented in the antenatal classes. These included topics such as nutrition, infant care information, newborn immunizations, and what to expect during delivery. Though the information given to both groups was the same, the intervention group had the information more accessible at any time and the app offered a feature where parents could ask questions on-demand and have them answered by an obstetrician. Both groups were assessed using the Edinburgh Postnatal Depression Scale (EPDS) at 4 weeks postpartum to determine the effectiveness of the trial. The treatment group average EPDS score decreased from 7.3 to 5.3 after the treatment, and the control group average EPDS score decreased from 7.2 to 5.9. It can be seen that the treatment group had an overall greater decline in postpartum depressive severity by an entire 2 points as compared to the control group. One strength of this study was the large sample size, as it allowed for a greater variety of women from various demographic backgrounds to participate. One limitation of the study is that only first-time mothers were able to be included in the study, so it is not possible to generalize these results to multiparous mothers (Chan, Leung, Tiwari, Or, and Ip, 2019).

**Conclusion**

While postpartum depression is prevalent and affects up to 20% of all postpartum mothers, it is sometimes not identified by women or their providers and potentially not treated or
under-treated (Chang and Chen, 2016). Research supports the formulation of best practice recommendations for care of mothers who are at risk for or exhibit symptoms of postpartum depression using integrative modalities. It is also important to incorporate non-pharmacologic strategies, when they are feasible and effective, to reduce cost to the patient and avoid potentially harmful medication side effects. There is significant evidence in the current literature that supports the use of screening guidelines, exercise routines, dietary interventions, and educational resources as potential treatment strategies for mothers experiencing postpartum depression (Chang et al., 2016; Lewis et al., 2018; van der Zee-van den Berg et al., 2017; Werner et al., 2016). Strengths of the literature reviewed in this chapter include the use of randomization between treatment and control groups, the use of double-blind trial structures, sample sizes determined by power analyses, use of the same standardized assessment tools across studies, and use of the specific population of postpartum mothers. All of these criteria allow for the results to be applied to clinical practice and determine that the studies are reliable. Some limitations of the above literature include that some studies did not use random assignment, used smaller sample sizes, the use of a convenience sample, and the lack of a control group in one study. Overall, there is significant data to support the implementation of integrative practices into the clinical setting in an attempt to treat postpartum depressive symptoms. In order to provide the best possible outcomes for the postpartum mother and her baby, it is crucial that evidence-based recommendations for nursing care of postpartum depression are implemented into treatment.
CHAPTER 3

Best Practice Recommendations to Treat Postpartum Depression

The purpose of this thesis was to develop evidence-based best practice recommendations for nurses caring for postpartum mothers who are at risk for developing postpartum depression. These recommendations are shown in Table 1 and are based on the literature reviewed in chapter 2. Once it has been determined that a mother needs treatment for depressive symptoms, the evidence-based recommendations from this thesis can be consulted. This recommendation for clinical practice provides nurses with strategies for the highest standard of care for postpartum patients. A range of interventions, from less to more invasive, are given so that the treatment can be individualized to fit the patient’s specific needs.

As of 2018, it was estimated that about 13-19% of postpartum women would develop postpartum depression following the birth of their child (Lewis et al., 2018). It is known that while certain predisposing factors place a woman at higher risk for developing PPD, the condition does not discriminate, and any postpartum woman is at risk. PPD is severely underdiagnosed and undertreated, and it may even be difficult for the woman herself to notice changes to her mental health because she is undergoing personal and developmental changes at the same time. It is critical to improve the detection and treatment of PPD with non-pharmacological interventions not only for the health and well-being of the mother, but also for the safety of the child. Long-term outcomes for children of mothers with PPD are known to have disturbed emotional regulation, behavioral difficulties, and less competent social behaviors (van der Zee-van den Berg, Boere-Boonekamp, Groothuis-Oudshoorn, IJzerman, Haasnoot-Smallegange, and Reijneveld, 2017). Non-pharmacological interventions for the prevention of PPD are the focus of this thesis because they typically cost less to implement, are more
accessible to various populations, and are safer for use in pregnancy and breastfeeding than common antidepressant medications (Micromedex, 2020). In Table 1, recommendations for best practice non-pharmacological interventions for PPD are outlined. These recommendations include dietary changes, exercise routines, and educational strategies that research supports in the treatment of PPD. The level of evidence for each piece of literature is also included in Table 1 to emphasize the reliability of these best practice interventions. Combining these recommendations and implementing them for all postpartum mothers would provide patients with the best possible care while they are in the postpartum period and may positively impact PPD outcomes.
Table 1

Best Practice Recommendations to Treat Postpartum Depression

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Rationale</th>
<th>References</th>
<th>Level of Evidence</th>
</tr>
</thead>
</table>
| Screening for postpartum depression should be       | Evidence suggests that screening alone may benefit PPD severity and helps | Committee on Obstetric Practice (2018). Screening for perinatal depression.  
<p>| implemented for all women during both the antepartum | indicate which patients need to be referred for further treatment of PPD. Screening should occur twice: once anytime in the antepartum period and once in the immediate postpartum period. Preferred screening methods are the EPDS and PHQ-9. | The American College of Obstetricians and Gynecologists, 757. Retrieved from <a href="https://www.acog.org/clinical/guidance/committee-opinion/articles/2018/11/screening-for-perinatal-depression">https://www.acog.org/clinical/guidance/committee-opinion/articles/2018/11/screening-for-perinatal-depression</a> | Level VII         |
| and postpartum periods.                            |                                                                          |                                                                          |                   |
|                                                     | Routine yoga-based exercise was shown to improve anxiety and              | Buttner, M. M., Brock, R. L., O’Hara, M. W., Stuart, S. (2015). Efficacy of yoga | Level II          |
|                                                     |                                                                          |                                                                          |                   |</p>
<table>
<thead>
<tr>
<th>Depression Symptoms in Postpartum Women</th>
<th>For Depressed Postpartum Women: A Randomized Controlled Trial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yoga Sessions should be conducted twice a week for an hour each time. The gentle Vinyasa flow routine should continue for at least 8 weeks.</td>
<td>Complementary Therapies in Clinical Practice, 21(2), 94-100. doi: 10.1016/j.ctcp.2015.03.003.</td>
</tr>
</tbody>
</table>


| Establishing a Regular Exercise and Wellness Routine Can Assist in Reducing Postpartum Depressive Symptoms. Exercise Sessions Should Consist of 30-Minute Sessions 5 Days Per Week, Depending on Recommendations From the Physician. Types of Exercise Can Include Jogging With the Stroller or Fast-Paced Walking. | Level II |

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>II</td>
<td>Providing postpartum women with educational materials regarding how to calm their child and promote sleep can reduce postpartum depressive symptoms. This education should discuss when to feed the baby, promoting an awareness of day vs. night, reducing the association between nighttime waking and feeding, and carrying and swaddling the child. It should be provided to the mother in the third trimester and at six weeks postpartum.</td>
<td>Werner, E. A., Gustafsson, H. C., Lee, S., Feng, T., Jiang, N., Desai, P., and Monk, C. (2016). PREPP: postpartum depression prevention through the mother–infant dyad. <em>Archives of Women’s Mental Health, 19</em>, 229-242. doi: 10.1007/s00737-015-0549-5</td>
</tr>
<tr>
<td>V</td>
<td>Postpartum mothers with preterm or low birth weight newborns are likely to benefit from skin-to-skin contact in the prevention of PPD. For mothers with these newborns, skin-to-skin contact can be done for 15-60-minute sessions and can continue up to two months after delivery.</td>
<td>Scime, N. V., Gavarkovs, A.G., and Chaput, K.H. (2019). The effect of skin-to-skin care on postpartum depression among mothers of preterm or low birthweight infants: a systematic review and meta-analysis. <em>Journal of Affective Disorders, 253</em>, 376-384. doi: 10.1016/j.jad.2019.04.101</td>
</tr>
</tbody>
</table>

During the antepartum period, education should be provided to the mother regarding how to reduce infant fussing and crying, skin-to-skin contact, maternal postpartum health, and infant care strategies that she can implement in the postpartum period as she cares for herself and her baby.
<table>
<thead>
<tr>
<th>When postpartum women and their husbands are provided with educational materials for the postpartum period, they are less likely to have depressive symptoms. The education should be presented to the couples between 24- and 28-weeks’ gestation in four separate 60–90-minute sessions. Education should discuss sleep hygiene, nutrition, maternal activity, self-image, and sexual health.</th>
<th>Sanaati, F., Charandabi, S. M. A., Eslamlo, H. F., and Mirghafourvand, M. (2018). A randomized controlled trial on the effect of lifestyle education for Iranian women and their husbands on post-partum anxiety and depression. <em>Health Education Research, 33</em>(5), 416-428. doi: 10.1093/her/cyy026</th>
<th>Level II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postpartum depression symptoms can be reduced by providing postpartum women with access to parenting resources via smartphone. These resources should be given to the mother during the antepartum period and accessible throughout the postpartum period. Parenting resource topics include infant nutrition, vaccines for newborns, and what to expect during labor.</td>
<td>Chan, K. L., Leung, W. C., Tiwari, A., Or, K. L., and Ip, P. (2019). Using smartphone-based psychoeducation to reduce postnatal depression among first-time mothers: randomized controlled trial. <em>Journal of Medical Internet Research mHealth and uHealth, 7</em>(5). doi: 10.2196/12794</td>
<td>Level II</td>
</tr>
<tr>
<td>The antepartum mother should be educated on the benefits of certain dietary interventions to continue throughout the postpartum period to promote optimal maternal health.</td>
<td>Postpartum women with poor sleep quality may benefit from the use of chamomile tea to improve sleep and depressive symptoms. Women should begin drinking one cup of chamomile tea per day at six weeks postpartum.</td>
<td>Chang, S. M. &amp; Chen, C. H. (2016). Effects of an intervention with drinking chamomile tea on sleep quality and depression in sleep disturbed postnatal women: a randomized controlled trial. <em>Journal of Advanced Nursing, 72</em>(2), 306–315. doi: 10.1111/jan.12836.</td>
</tr>
</tbody>
</table>
Summary of Best Practice Recommendations

One of the most important aspects of the nursing profession is the role as a patient advocate. Nurses serve their patients by acting to preserve their human dignity, protect them from suffering, and by giving them a voice when they are most vulnerable and need assistance (Loyola Chicago ABSN, 2018). In order to be an effective patient advocate and not simply a healthcare provider, a nurse must consider all aspects of a patient’s condition, including physical, emotional, mental, and spiritual health. An obstetric nurse caring for antepartum, intrapartum, and postpartum women is often focused on the physical health of the mother and her child, but it is also critical to consider the mother’s mental health as well because of the effect that poor mental health may have on the mother and child’s safety in the future. Therefore, a nurse who excels in patient advocacy should implement best practice recommendations to screen for and prevent the development of postpartum depression. The use of the best practice recommendations included in this thesis allows for nurses to provide care for their patients beyond the physical and demonstrates exceptional nursing care in identifying an at-risk problem before it develops.

Hospitals can adopt a postpartum depression screening and education program that is implemented for all postpartum women who are admitted to the unit. This ensures that all patients are receiving the same level of anticipatory treatment and ensures that no patient is forgotten in the prevention of PPD. The research evidence discussed in chapters 2 and 3 overwhelmingly supports the use of nonpharmacological treatments to prevent or reduce the incidence of PPD, and nurses caring for this population should stay informed about the effectiveness of simple interventions such as an exercise routine or educational materials regarding parenting strategies. Implementation of nursing recommendations is only successful
when nurses recognize the need for change and are adequately supported in their efforts, and therefore nurses need to be educated on the most recent best practice recommendations so they can fight for nursing care changes for their patients (American Nurses Association, 2021).

The research analyzed in this thesis supports the use of dietary, exercise, and educational interventions to reduce the incidence of postpartum depression. Specific interventions that are supported by research to prevent PPD include chamomile tea, yoga, aquatic exercise, exercise and wellness routines, lifestyle education, smartphone-accessible educational materials, parent-centered childcare education, PPD screening tools, and skin-to-skin contact. Any combination of these strategies will promote reduction of PPD symptoms and demonstrates integrative nursing care as the nurse works to prevent the patient from developing a detrimental condition such as PPD.

The best practice recommendations gathered in this thesis aim to better the obstetric nursing profession for nurses, patients, and the children of patients everywhere. By implementing the recommendations discussed above, nurses advocate for their patients’ psychiatric health and well-being in the postpartum period. Nurses following these recommendations would be seeking to eliminate the major problem of undiagnosed postpartum depression and act to reduce the overall incidence of PPD. Moreover, nurses using these recommendations would promote the principles of integrative nursing by using less invasive and intensive treatments, such as non-pharmacological interventions, before escalating care to more intensive medications and therapies (Kreitzer, 2015). Implementing these policies allows for the obstetric nurse to provide the highest standard of care for every patient they encounter. Chapter 4 will include the logistics of the dissemination plan for these best practice recommendations.
CHAPTER 4

The previous three chapters of this thesis have discussed various evidence-based practice recommendations to reduce postpartum depression (PPD) and its symptoms for postpartum mothers. This chapter will focus on a plan to disseminate the information compiled in this thesis to the healthcare professionals for whom the best practice recommendations have been created and who provide care for postpartum mothers. The framework used to formulate this dissemination plan was the Dissemination Planning Tool (DPT), outlined in a 2005 publication by Carpenter, Nieva, Albaghal, and Sorra.

The Dissemination Planning Tool (DPT) provides guidelines for patient safety researchers, such as the author of this thesis, to create a plan to distribute the best practice recommendations to the healthcare providers who will be using them when caring for the postpartum patient population. The DPT is useful in assisting the researcher in considering how to realistically compile and disseminate the research findings so they can be implemented in a patient care setting. When using the DPT, the researcher must consider what information is going to be disseminated, who will apply it into their practice, individuals and organizations that can be used to reach end users, how to convey the research outcomes, how to determine what is effective, and where to begin the dissemination process (Carpenter et al., 2005).

**Dissemination Plan Framework**

The DPT used for this thesis is comprised of six components. The six components are outlined below in Figure 1. The remainder of this chapter will follow these steps in a detailed discussion of how the best practice recommendations for care can be implemented into an obstetric patient care setting to improve postpartum depression incidence.
I. Specifying research findings and products: What you intend to disseminate

The research findings that will be disseminated as a part of this thesis are the best practice recommendations discussed in chapter three. They are as follows: a) Screening for postpartum depression should be implemented for all women during both the antepartum and postpartum periods, b) During the postpartum period, patients should be educated on the benefits of formulating a regular exercise routine that is safe for pregnancy that can be used during the postpartum period, c) During the postpartum period, education should be provided to the mother regarding how to reduce infant fussing and crying, skin-to-skin contact, maternal postpartum health, and infant care strategies that she can implement as she cares for herself and her baby, d) The postpartum mother should be educated on the benefits of certain dietary interventions to promote optimal maternal health. Although these four best practice recommendations for care discuss different aspects of postpartum depression incidence reduction, they will be disseminated...
together as one to provide a comprehensive set of recommendations for healthcare professionals. Because postpartum depression is seriously underreported and undertreated, it is necessary to formulate screening and prevention recommendations in an attempt to reduce its incidence. Promoting standardized screening guidelines across various hospitals and birth centers also helps to ensure that the majority of patients are receiving a high standard of care. Additionally, each research study discussed in the literature review had significant evidence to show that its specific intervention was beneficial to patients at risk for postpartum depression. Because of these strong results and a patient need for additional best practice recommendations, the findings of this thesis are ready to be disseminated.

II. Identifying end users

According to Carpenter et al. (2005, para. 11), end users are “individuals, health care professionals, or delivery organizations that could benefit from and use” the research findings of a dissemination plan. For the purpose of this thesis, end users may include obstetric nurses, specifically postpartum nurses but may also include labor and delivery and antepartum nurses, obstetricians, nurse midwives, and administrators at a certain hospital. All of these health care disciplines play a role in implementing the best practice recommendations for care of the target patient population. The recommendations are useful to these end users because the recommendations assist the professionals in providing the best patient outcomes and advocating for the patients. If the targeted end users were to implement these recommendations into their care, they would provide a higher quality of care for mothers choosing to deliver their baby at a certain hospital and could help to improve postpartum depression incidence. There are many ways in which various end users can be involved in the process of introducing the recommendations into practice. For example, postpartum nurses can introduce the postpartum
screening recommendations, such as screening using the Edinburgh Postnatal Depression Scale in the first few days after delivery, and assess how easily the screening method works from a nursing perspective. Additionally, obstetricians and nurse midwives can assess their patients’ readiness to learn about postpartum exercise routines at one of their third trimester visits. Some barriers that end users may face when attempting to implement the best practice recommendations for care are that each end user may feel like they are unable to implement the entire set of recommendations. It is important to remind end users that they each play an important role in the overall dissemination of the recommendations, but individually they will not each implement every single recommendation. As a complete patient care team (nurses, doctors, midwives, etc.), the end users will be able to implement the best practice recommendations to improve patient outcomes.

III. Working with dissemination partners

In order to effectively disseminate the best practice recommendations of this thesis, it is important to consider working with additional partners in order to reach end users so they can implement the recommendations (Carpenter et al. 2005). Table 2, below, outlines some of the potential individuals, organizations, and networks that may help connect end users to the research and recommendations outlined in this thesis.

Table 2

<table>
<thead>
<tr>
<th>End users</th>
<th>Individual, organization, or network</th>
<th>Importance of end users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antepartum, labor and delivery, and postpartum nurses</td>
<td>Specific hospital systems such as Tucson Medical Center and Banner University Medical Center</td>
<td>Directly provide care to the target patient population</td>
</tr>
<tr>
<td>Obstetricians and nurse midwives</td>
<td>Specific maternal health networks such as El Rio Health and Crossroads OB/GYN</td>
<td>Directly provide care to the target patient population</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>------------------------------------------------------</td>
</tr>
<tr>
<td>Hospital administrators</td>
<td>Specific hospital systems such as Tucson Medical Center and Banner University Medical Center</td>
<td>Play a role in creating and monitoring hospital policies and procedures for postpartum depression</td>
</tr>
</tbody>
</table>

For the purposes of this thesis, the individuals, organizations, and networks mentioned in Table 2 are limited to the Tucson, Arizona area. The hospitals and maternal health networks mentioned provide care for pregnant women in the Tucson area and seek to provide all patients with high standards of care. They would be willing to work together to implement the best practice recommendations for care because these recommendations would ultimately benefit their patients the most. They may be hesitant to implement these new recommendations if they were to pose an additional cost to the hospital or maternal health network, but this potential disadvantage is likely outweighed by the improved patient outcomes resulting from the implementation of these recommendations. Therefore, the appeal of these best practice recommendations is that the nurses, doctors, and other health care professionals who work within the hospital and maternal health networks would be motivated to improve outcomes for their patients and would be optimistic about implementing new recommendations that could reduce patient risk for postpartum depression. In order to develop a lasting relationship with these organizations, the author of this thesis would need to present the recommendations to them in a way that describes the benefits to both the organization and its patients. The credibility that is established by the presentation of research with strong evidence will help to encourage hospitals and maternal health networks to promote the use of these best practice recommendations for care of postpartum patients.
IV. Communicating your message

The Dissemination Planning Tool (Carpenter et al., 2005) emphasizes the importance of communicating the best practice recommendations to the health care professionals who will be using them to care for patients. In order for the information to be communicated to nurses, doctors, and midwives across multiple hospitals, units, and practices, contacting unit managers and administrators at each location would be most effective. The author of this thesis would summarize the best practice recommendations and research findings into an educational video aimed at informing nursing unit managers and hospital administrators. The video would need to discuss the types of interventions that were discovered through the research presented in chapter two, the need for improved treatment and prevention of postpartum depression, and the proposed recommendations. Additionally, the video should go into detail regarding how the recommendations could be implemented in the patient care setting. This video would be distributed via email to applicable unit managers and administrators at the organizations outlined in Table 2, and could be sent directly to doctors and midwives who do not commonly practice at the hospital facility in order to reach them most effectively. The researcher would also offer to meet with the managers and administrators in person to further discuss the recommendations so they can be properly communicated to the final end users.

Once the unit managers and administrators are familiar and comfortable with the best practice recommendations for care, they would be able to schedule a professional meeting to communicate the recommendations out to staff nurses and doctors. For example, on Tucson Medical Center’s postpartum unit, nurses attend a unit huddle before beginning each shift. At these huddles, the charge nurse and unit manager can share new information that staff nurses need to know about policy changes or recommendations. The unit manager could use this huddle
time to explain the best practice recommendations for care as they apply to the specific unit and population. Other units, such as antepartum and labor and delivery, could follow a similar structure of communication, using a professional meeting setting to disseminate the recommendations to the end users as it applies to the care of their specific patient population.

Lastly, professional nursing and medical organizations set recommendations for care of the obstetric population. The Association of Women’s Health, Obstetric, and Neonatal Nurses (AWHONN) and The American College of Obstetricians and Gynecologists (ACOG) are professional organizations that host conferences to further the education of nurses and doctors working in the obstetric field. AWHONN and ACOG could host professional conferences regarding updated best practice recommendations for care of postpartum depression, which would allow for communication to any nurse or provider who is a member of these organizations. Additionally, the prestige of both organizations provides for increased credibility and may assist in disseminating the recommendations on a widespread basis.

V. Evaluating success

In order to determine whether the initial communication of the best practice recommendations was successful, it is critical for the researcher to use evaluation methods to test the understanding of the material by the end users (Carpenter et al., 2005). This is useful so that the researcher can make adjustments to the communication strategies if it appears that the end users do not have full comprehension of the recommendations. One strategy to assess the effectiveness of the educational video sent to unit managers and administrators is to conduct a brief interview after they view the video to test their understanding. The researcher would ask the managers and administrators to reiterate the information presented in the video, including why there is a need for additional postpartum depression treatment and what recommendations are
being suggested. This would allow the researcher to assess how well the managers and administrators understand the material provided to them and demonstrates how they will convey this information to the end users. Once the researcher has deemed that each manager and administrator effectively understands the recommendations and will convey them well to the end users, they will be approved to communicate through the methods discussed in section V. Managers and administrators will be asked to keep a count of how many end users they educate so that the researcher can track the impact of these recommendations. Lastly, to evaluate the end users’ understanding of the recommendations, the managers and administrators will initiate a discussion among the end users at the end of each educational session, such as at the end of the shift huddle. This discussion could include having each end user reiterate something they learned from the education, or having the group discuss why there is a need for these recommendations to be implemented. This discussion will assist in measuring the comprehension of the education by the end users and can give the researcher insight into how the recommendations will be used in clinical practice. Additionally, the discussion would highlight areas of the recommendations that the researcher needs to reiterate with the end users to ensure full understanding.

**Developing a summary and dissemination work plan**

The Dissemination Planning Tool recommends that researchers create a summary of the dissemination plan (Carpenter et al, 2005). The DPT includes a template for this summary, which is below and includes the answers regarding this thesis in italics.

- My research finding or product is **best practice recommendations for non-pharmacological interventions for mothers with postpartum depression**.

- It can be used to **reduce the incidence or symptom severity for mothers with postpartum depression without the use of pharmacological treatments**.
• My primary end users are antepartum nurses, labor and delivery nurses, postpartum nurses, obstetricians, nurse midwives, and hospital administrators.

• I plan to involve users in my dissemination efforts by educating the end users on the importance of strategies to reduce postpartum depression and the details of each recommendation, as well as by measuring their overall understanding of the recommendations after the education has been completed.

• I can use the following individuals, organizations, and networks Banner University Medical Center, Tucson Medical Center, El Rio Health, and Crossroads OB/GYN to help.

• The ways that I will communicate the results include an educational video provided to nurse managers and hospital administrators to inform them of the recommendations, the promotion of verbal education by nurse managers during shift huddles on nursing units to reach end users, and the creation of professional conferences by obstetric nursing and medical organizations to educate healthcare professionals.

• Potential obstacles that I face in disseminating my research include added costs to hospitals and organizations to implement the recommendations, which may discourage hospitals from wanting to support this new research, and hesitancy from healthcare professionals to use non-pharmacological strategies in place of medications.

• I can mitigate these obstacles by educating end users on the importance of acting to reduce the incidence of postpartum depression and how positive patient outcomes will outweigh potentially increased costs, and emphasizing the principles of integrative nursing to explain why non-pharmacological interventions should be attempted prior to the use of medications.
I plan to evaluate the dissemination plan by assessing the knowledge of unit managers and administrators after they view the educational video to determine how much information they retained and asking these managers to keep a count of how many end users they educate during unit huddles. Additionally, the electronic medical record for each patient would include a form where discharge teaching could be documented by the nurse in order to assess how many patients are receiving the proper education and how many nurses are educating.

I plan to encourage feedback from end users and dissemination partners by initiating a discussion regarding the importance of these recommendations at the end of unit huddles to assess how well end users understand the education and provide feedback to them by providing unit managers and administrators with further information to answer questions that end users may have after the education and discussion.

The sixth step of the Dissemination Planning Tool is to create a dissemination work plan, which includes immediate and long-term action items, schedules and persons responsible (Carpenter et al., 2005). For the purposes of this thesis, the dissemination work plan will not be included.

**Strengths, Limitations, and Recommendations for Future Research**

One strength of this thesis and the research it discusses is the variety of different interventions that were investigated. Instead of focusing on one type of intervention and locating research on that specific topic, the literature reviewed in this thesis ranges from yoga therapy to chamomile tea to parenting strategy education. This range of different interventions allows for a well-rounded literature review that supports a myriad of non-pharmacological interventions,
allowing for postpartum mothers and their patient care team to choose which interventions may be most effective for her specific case.

One limitation of this thesis is that not all postpartum women will qualify to be treated with only non-pharmacological interventions. In severe cases of postpartum depression, medications such as antidepressants may be necessary, and hospitalization may even be recommended if the mother is a danger to herself or others (National Alliance on Mental Illness, 2021). It is important to consider that non-pharmacological interventions will not be effective for every patient, and that in certain cases, it may be beneficial to escalate to pharmacologic agents or treatments such as electroconvulsive therapy. This thesis only discusses interventions for milder cases of postpartum depression that may be improved with less invasive treatments.

Further research is needed regarding the safety of certain non-pharmacological interventions, such as moderate exercise, in this population. Specifically, postpartum mothers who have had a high-risk delivery, such as a Cesarean section or a vaginal delivery with an episiotomy, laceration, vacuum assist, or forceps assist, among others, may not be able to participate in moderate physical activity as early due to the risk of injury. It is critical for all postpartum patients to consult with their provider regarding exercise recommendations, but more research is necessary regarding the safety of postpartum exercise after a high-risk delivery.

**Summary**

In conclusion, this thesis developed best practice recommendations for care to reduce the incidence and severity of postpartum depression symptoms. Current literature was reviewed in order to formulate these recommendations based on scholarly evidence. Because postpartum depression is severely underdiagnosed and undertreated, it is critical for nurses to act as patient advocates to implement recommendations that can improve outcomes for the postpartum
population. Promoting these best practice recommendations in the obstetric nursing world can improve rates of postpartum depression symptom incidence, reduce the risk of severe postpartum depression occurrence, and provide obstetric patients with the highest standard of care, allowing them to focus on beginning a new chapter of their life with their newborn.
References


Chang, S. M. & Chen, C. H. (2016). Effects of an intervention with drinking chamomile tea on...


