SCREENING AND FOLLOW UP FOR POSTPARTUM DEPRESSION: HOW TO IMPROVE PRACTICE

by

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Date

Advisor

Date
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DEDICATION

I would like to dedicate this project to my family, friends, and most importantly my husband, Nicholas. Without their continuous support and encouragement this would not have been possible. Thank you for always being patient with me and pushing me towards my goals. Thank you for relieving my stress and worries throughout graduate school and always being there for me during this very important time in my life.
ACKNOWLEDGMENTS

I would like to acknowledge my project advisor, Dr. Chris Paquin, for all the time and effort she dedicated to me as her advisee. Thank you for your patience, support, and guidance throughout this project. This project would not have been possible without you. I would also like to thank my project site facilitator, Katherine Castillo, for allowing me to conduct the project at this facility and other staff and providers at the clinic for supporting and participating in the project. Lastly, I would like to thank my classmates in the DNP program for their support and encouragement throughout the DNP program.
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ABSTRACT

Postpartum depression (PPD) is one of the most common mental health conditions, affecting one in seven women during their reproductive years (American College of Obstetricians and Gynecologists [ACOG], 2018). The purpose of this evidence-based practice (EBP) project was to improve screening and management of PPD using the Edinburgh Postnatal Depression Scale (EPDS) screening tool and a protocol for appropriate treatment and follow up care for PPD. A protocol was created by the project leader with information on screening and diagnosis, follow up, and treatment for PPD. The protocol also included information on how to assess for suicidal and/or homicidal ideation in women with PPD. Women who were seen for a 2- or 6-week postpartum visit (n = 18) were recruited at a women’s health clinic in Northwest Indiana to participate in the project. Data collection was done on a pre-intervention group to determine if the EPDS was used prior to implementation of the project. The post-intervention group (n = 18) received screening with the EPDS at their postpartum visit. The number of participants screened with the EPDS comprised the primary outcome and was measured as a frequency. The secondary outcome of detection rates of PPD was measured by EPDS scores of 10 or greater. Data were analyzed using a Mann-Whitney test, chi-square test, and a simple linear regression to determine if demographic variables had an impact on EPDS scores as another secondary outcome. The primary outcome was met with a 50.3% increase in screening rates using the EPDS. The secondary outcome was also met with a 100% increase in detection rates of postpartum depression from using the EPDS. The data analysis concluded that the variable of age was statistically significant and had an impact on EPDS scores. Findings from this project may be used in practice to ensure appropriate screening and management for PPD is being implemented.
CHAPTER 1
INTRODUCTION

Background

Postpartum depression is a common mood disorder occurring up to one year after giving birth with a variety of life-altering symptoms (Kurtz et al., 2017). The symptoms can include depressed mood, decreased pleasure in activities, significant change in appetite and/or sleep, agitation, fatigue, feelings of hopelessness or worthlessness, and recurring thoughts of death or suicide (Kurtz et al., 2017). Postpartum depression is one of the most common medical conditions, affecting as many as one in seven women (ACOG, 2018). The initial onset of depression in women peaks during reproductive-age years (ACOG, 2018). Postpartum depression occurs in the postpartum period, which can be defined as the first 12 months following birth (ACOG, 2018). The symptoms of postpartum depression not only affect women, but their infants and families as well.

A single cause for postpartum depression cannot be identified, however it may be attributed to physical and emotional changes that occur during and after pregnancy (Mayo Foundation for Medical Education and Research [MFMER], 2018). Hormone levels drop dramatically after giving birth and this drop in estrogen and progesterone may contribute to postpartum depression (MFMER, 2018). Sleep deprivation and feelings of anxiety and being overwhelmed while caring for a newborn can also contribute (MFMER, 2018). Risk factors for postpartum depression include a history of depression, a diagnosis of bipolar disorder, postpartum depression with previous pregnancy, family history of depression, stressful life events, having a child with special needs, having multiples, inadequate support system, financial problems, or an unplanned/unwanted pregnancy (MFMER, 2018).

Postpartum depression is often not detected for several reasons. Very few women report symptoms to their health care providers. Symptoms such as changes in sleep or appetite are not always recognized as depression symptoms and are attributed to normal changes in the
postpartum period (ACOG, 2018). Women are also reluctant to report symptoms due to feelings of shame and the stigma associated with postpartum depression (ACOG, 2018; Learman, 2018). In a study that addressed the recognition of postpartum depression, less than 20% of women who were diagnosed with postpartum depression had previously reported their symptoms to a health care provider (ACOG, 2018). Perinatal depression is the most frequently under-diagnosed complications associated with pregnancy (Registered Nurses’ Association of Ontario [RNAO], 2018). In addition, health care providers do not always follow evidenced-based practice and there is a lack of screening for postpartum depression (Austin & Highet, 2017; Kendig et al., 2017; Learman, 2018). This lack of screening may be attributed to lack of time and education, the inability to identify an appropriate screening tool and/or interpreting screening results, poor referral pathways, and inadequate community mental health services (Austin & Highet, 2017; Learman, 2018). When there are no plans in place for obstetric practices to effectively respond to positive screenings for postpartum depression, less than 20% of women who screen positive receive mental health care (Moore Simas et al., 2018). If left undetected and untreated, postpartum depression can have devastating effects on women, their infants, and their families. Symptoms of postpartum depression can lead to serious health problems, including death (ACOG, 2018; Austin & Highet, 2017). Death from maternal suicide exceeds postpartum hemorrhage and hypertensive disorders as a cause of maternal mortality (ACOG, 2018). It is extremely important for health care providers to provide screening and appropriate follow up to detect and treat postpartum depression. Healthy People 2030 has set a goal to improve the proportion of women screened for postpartum depression at their postpartum check-up because of this importance (United Health Foundation, 2021).

**Data Supporting Need for the Project**

**Global, National, Regional, and State Data**

Approximately 10% of pregnant women and 13% of postpartum women will experience a mental illness (most likely depression) globally (RNAO, 2018). Perinatal depression is a notable
cause of disease burden globally as well (RNAO, 2018). Australian studies report prevalence of postpartum depression in a 12-month period as one in six women (Austin & Highet, 2017). Financial costs associated with postpartum depression in Australia were estimated at 60.68 million dollars annually. The Canadian Maternity Experience Survey reported a rate of 8.46% of postpartum depression, measured by the Edinburgh Postnatal Depression Scale (EPDS). The United States has a high incidence of perinatal depression, with as many as one in seven to 10 pregnant women and one in five to eight postpartum women with a depressive disorder (Van Niel & Payne, 2021). Perinatal depression affects 10 to 20% of women in the United States (ACOG, 2018; Kurtz et al., 2017; RNAO, 2018); this percentage equates to more than half a million women with perinatal depression each year (Van Niel & Payne, 2021). In the state of Indiana, 18.1% of women reported postpartum depressive symptoms in 2018 (Centers for Disease Control and Prevention, 2021). In the last three years, Indiana’s rates for postpartum depression have trended upward from 11.9% to 13.2% from 2017 to 2020 (United Health Foundation, 2021). This percentage does not account for the many women who do not report symptoms to their health care providers (ACOG, 2018).

**Clinical Agency Data**

The women’s health clinic is in need of a practice change regarding screening and follow up for postpartum depression. Prior to project implementation, the obstetrician/gynecologist (OB/GYN) and nurse practitioner providing care to women in the postpartum period did not have a consistent method for screening for postpartum depression. The provider asked patients simple questions pertaining to feelings of depression and anxiety at the patient’s postpartum check-up. These questions included asking the patient if she is feeling sad, anxious, or depressed. This check-up occurred at two and six weeks postpartum for women who delivered via cesarean section and at six weeks for women who delivered via vaginal delivery. If the patient answered yes to these questions, the EPDS was administered. Patient charts for women who delivered between February 23rd, 2021, and July 7th, 2021, were examined to determined
what type of screening was done for postpartum depression. Encounter notes from each patient chart were assessed. Of the 39 patients who were seen for a postpartum check-up at 2- or 6-weeks, only one patient was screened with the EPDS. According to the encounter note, this one patient voiced concerns and feelings of depression at her postpartum visit, which took place at 4 weeks postpartum. The OB/GYN then screened the patient with the EPDS and diagnosed the patient with postpartum depression based on the score and clinical judgement of symptoms, however a specific score or symptoms were not addressed in the encounter note. The encounter note mentioned that the patient was treated for postpartum depression with pharmacologic therapy, a specific medication was not mentioned and follow up after this positive screening was not given. The other 38 patients were asked questions by the OB/GYN and were not administered the EPDS tool. There were no other diagnoses of postpartum depression between the 38 women who were screened with the questions asked. Based on this clinical data, the percentage of patients screened with the EPDS and diagnosed with postpartum depression in a 4-and-a-half-month period was 2.5% of patients.

**Purpose of the Evidence-Based Practice Project**

**Purpose Statement and PICOT Question**

The purpose of this EBP project was to improve screening and management of postpartum depression through the use of the EPDS screening tool and appropriate follow up care. The goal of the project was to improve timely detection and treatment of postpartum depression in an obstetrical care setting. The project addressed the following PICOT question: Among women who are 2- to 6-weeks postpartum, how does the implementation of a screening tool (EPDS) and follow up protocol in a women’s health care setting affect screening rates and detection of postpartum depression, compared to current practice, over a 19-week period?

**EBP Project Description**

The project intervention was the use of the EPDS tool for all postpartum women at their 2- or 6-week postpartum visit to screen for postpartum depression. A protocol was put in place
to ensure all providers were following evidence-based practice regarding screening and follow up, including treatment for postpartum depression. The protocol included when to screen for postpartum depression and with what tool and how to intervene with a positive screening, including appropriate follow up visits and referral to mental health, if necessary, alternative therapy, and pharmacologic treatment. The registered nurse (RN) at the clinic was to administer a paper form of the EPDS tool to all women at their 2- or 6-week postpartum visit. However, due to issues with staffing, the receptionists at the front desk administered the EPDS form. The score of the EPDS was then entered into the patient’s chart manually by the RN. With a score of 10 or greater, the OB/GYN or nurse practitioner addressed the results with the participant and inquired about specific symptoms the patient might have been experiencing. Following this interview with the participant, a treatment plan was discussed as specified in the protocol.
CHAPTER 2
EBP MODEL AND REVIEW OF LITERATURE
Evidence-based Practice Model

Overview of EBP Model

The model chosen for this EBP project was the Johns Hopkins Nursing Evidence-Based Practice model (JHNEBP). The JHNEBP model is well organized into different stages of the PET process, which consists of the practice question, evidence, and translation (Melnyk & Fineout-Overholt, 2019). The goal of the model is to incorporate evidence-based research and practice into the clinical setting. The JHNEBP fits well with this EBP project because the model applies to clinical, learning, and operational questions in any nursing setting. Therefore, the JHNEBP model was applied to the clinical inquiry or question regarding postpartum depression and screening for this project. The clinical site chosen for this project did not follow evidence-based practice recommendations regarding postpartum depression screening prior to implementation of this project. A practice question was identified with the project site facilitator, based on the clinic’s needs. In order for evidence-based research and practice to be implemented into the clinical site, the next steps of the JHNEBP needed to be followed. These steps included identifying key stakeholders, a literature search and appraisal of evidence, synthesizing the evidence, and making specific recommendations for change based on the evidence (Melnyk & Fineout Overholt, 2019). The final step included constructing a plan to implement recommendations into practice and evaluating the outcomes and reporting them to key stakeholders (Melnyk & Fineout Overholt, 2019). Refer to Figure 2.1 for an illustration of the JHNEBP model. Please note that permission was granted to use the JHNEBP model from the Johns Hopkins Hospital/Johns Hopkins University School of Nursing.
Figure 2.1

JHNEBP Model
Literature Search

Sources Examined for Relevant Evidence

The Joanna Briggs Institute (JBI), TRIP, CINAHL, PsycINFO and MEDLINE with Full Text databases were utilized for this literature search. The same keywords and phrases were searched across all databases to yield similar results. Several different keywords and phrases were trialed within each database for the literature search and with the help of the Research Services Librarian, final keywords and phrases were chosen. The keywords and phrases included postpartum depression, screen*, detect*, diagnos*, obstetric*, “primary care”, “primary health care”, and “primary healthcare”. Quotations were used within the TRIP, MEDLINE, PsycINFO, and CINAHL databases for the phrase postpartum depression and quotations were used within the CINAHL, MEDLINE, and PsycINFO databases for the phrases primary care, primary health care, and primary healthcare. The limiter of the year 2016 to current was applied for all searches. The limiter of guidelines was applied in the TRIP database search and limiters of English language, scholarly peer reviewed journals, and female gender were applied in the CINAHL, MEDLINE, and PsycINFO database searches. Organizational websites pertinent to postpartum women and depression were also searched including the American College of Obstetricians and Gynecologists (ACOG), the Agency for Healthcare Research and Quality (AHRQ), and the Association of Women’s Health, Obstetric and Neonatal Nurses (AWHONN). The literature search was reviewed and signed off by the Research Services Librarian and deemed adequate for this project’s literature search and review. A more recent literature search was conducted in February of 2022 to search for new evidence, however no relevant new literature was found.

Inclusion and exclusion criteria were considered for the selection of studies. Studies were chosen that focused on detection of depression in postpartum women and follow up care in the postpartum period. Follow up care in the postpartum period includes further assessment based on initial screening, management of postpartum depression by the women’s health
specialist, or referral to a mental health specialist. The study also needed to address screening tools for detection of postpartum depression. Studies were excluded if they focused primarily on pharmacologic and alternative treatment for prevention or treatment of postpartum depression. If studies did not include women in the postpartum period or focused on depression in fatherhood, they were excluded as well. Higher levels of evidence were chosen including systematic reviews, evidence summaries, and clinical practice guidelines (CPGs). Expert opinions were also chosen from ACOG and AWHONN, which are accredited organizations.

The number of results yielded from each database search can be seen in the PRISMA flow chart on the following page. The initial literature search across all databases and organizational websites yielded 674 results. After the initial literature search, the titles of 516 results were skimmed for relevance. This included all results found in CINAHL, TRIP, JBI, PsycINFO, ACOG, and AWHONN and only 160 results from the MEDLINE search. The first 160 results from MEDLINE were skimmed and after results no longer seemed relevant, 158 results were eliminated without review. After skimming the titles of 516 results, 414 results were eliminated because they were not relevant to the topic. This left 102 results to be screened for use in the project by reviewing the abstracts. After screening and review, 71 pieces of evidence were eliminated, 5 duplicate records identified were removed, and 26 pieces of evidence were assessed for eligibility for use in this project. The 26 pieces of evidence were thoroughly reviewed and assessed. Inclusion and exclusion criteria were applied to each article and 12 pieces were eliminated that did not meet these criteria, leaving 14 pieces of evidence for consideration. After thoroughly reading and leveling the evidence, three more pieces of evidence were eliminated that were lower levels of evidence and poor quality. The final number of studies chosen for this project was 11 pieces of evidence. Refer to Figure 2.2, the PRISMA flow chart, on the following page to follow each step of the literature search and review.
Figure 2.2

PRISMA Flow Chart

Identification of studies via databases and registers

- Records identified from:
  - CINAHL (n = 81)
  - MEDLINE (n = 318)
  - TRIP (n = 66)
  - JBI (n = 38)
  - PsycINFO (n = 112)
  - ACOG (n = 34)
  - AWHONN (n = 25)

- Records removed before skimming/screening:
  - Records removed for other reasons (n = 158)

- Records skimmed (n = 516)

- Records excluded (n = 414)

- Reports screened (n = 102)

- Reports not retrieved (n = 71)
  - Duplicate records removed (n = 5)

- Reports excluded:
  - Did not meet inclusion/exclusion criteria (n = 12)
  - Lower levels of evidence excluded (n = 3)

- Reports assessed for eligibility (n = 26)

- Studies included in review (n = 26)
  - Reports of included studies (n = 11)
Levels of Evidence

The resource used to level the evidence was the Melnyk and Fineout-Overholt leveling system (Melnyk & Fineout-Overholt, 2019). Melnyk and Fineout-Overholt (2019) have a rating system for the hierarchy of evidence and this system is used when an intervention or treatment question is being considered. The levels of evidence are rated from level one to level seven, with level one being the strongest level of evidence (Melnyk & Fineout-Overholt, 2019). There are seven pieces of evidence being used for this project that are level I and four pieces of evidence are level VII, according to Melnyk and Fineout-Overholt (2019). The level I pieces of evidence include systematic reviews, evidence summaries, and CPGs. The four pieces of evidence that fall into level VII include expert opinions that provide recommendations for perinatal depression screening, intervention, referral, and follow up from accredited organizations. Refer to Table 2.1 for a summary of the evidence, including leveling and quality of evidence and tools used for appraisal.
### Table 2.1

**Summary of Evidence**

<table>
<thead>
<tr>
<th>Author/yr</th>
<th>Database(s)</th>
<th>Level of Evidence/Type</th>
<th>Quality/Tool</th>
</tr>
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<tbody>
<tr>
<td>Austin &amp; Highet (2017)</td>
<td>TRIP</td>
<td>I/CPG</td>
<td>High/AGREEII</td>
</tr>
<tr>
<td>Che Abdullah et al. (2019)</td>
<td>TRIP</td>
<td>I/Systematic Review</td>
<td>High/CASP</td>
</tr>
<tr>
<td>Edwards MPhil (2020)</td>
<td>JBI</td>
<td>I/Evidence Summary</td>
<td>High/CASP</td>
</tr>
<tr>
<td>Kendig et al. (2017)</td>
<td>AWHONN</td>
<td>VII/Expert Opinion</td>
<td>High/JBI</td>
</tr>
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<td>Kurtz et al. (2017)</td>
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<td>VII/Expert Opinion</td>
<td>Good/CASP</td>
</tr>
<tr>
<td>Maurer et al. (2018)</td>
<td>CINAHL</td>
<td>I/Evidence Review</td>
<td>Good/CASP</td>
</tr>
<tr>
<td>O’Connor et al. (2016)</td>
<td>TRIP</td>
<td>I/Systematic Review</td>
<td>High/CASP</td>
</tr>
<tr>
<td>Registered Nurses' Association of Ontario (2018)</td>
<td>TRIP</td>
<td>I/CPG</td>
<td>Good/AGREEII</td>
</tr>
<tr>
<td>Simas et al. (2018)</td>
<td>MEDLINE</td>
<td>I/Systematic Review</td>
<td>Good/CASP</td>
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</table>
**Analysis and Appraisal of Relevant Evidence**

Each piece of evidence was critically appraised using individualized appraisal tools to determine the quality of evidence. Evidence summaries and systematic reviews chosen for this synthesis paper were critically appraised using the Critical Appraisal Skills Programme (CASP) appraisal checklists. The CASP appraisal tool provides checklists specific to the type of evidence needing appraisal. These checklists are piloted with health care practitioners and include questions to successfully appraise a systematic review. The expert opinions chosen were critically appraised using the JBI appraisal tool. The JBI appraisal tool was chosen because there is a checklist specific to expert opinions within this tool. The JBI appraisal tool for expert opinions assesses the quality of the opinions and recommendations and ensures that the opinion has standing in the field of expertise. The CPGs were critically appraised using the Appraisal of Guidelines for Research and Evaluation (AGREE) II appraisal tool. The AGREE II appraisal tool was chosen to critically appraise the CPG used in this paper because this tool is specific to the appraisal of CPGs. The AGREE II assesses the quality of the guidelines and the methods/strategies used to develop them. Health care providers can use this tool to assess guidelines before implementing them into their practice.

Studies selected for synthesis were deemed as good or high-quality evidence after appraisal. Each piece of evidence addressed a clearly focused question and identified the population being studied (postpartum women). Studies reviewed in systematic reviews and evidence summaries were of appropriate design and were assessed for quality by the authors using appropriate appraisal tools and checklists. Evidence summaries provided best practice recommendations for psychosocial assessment of women in the postpartum period based on guidelines and systematic reviews included in the literature. The systematic reviews and evidence summaries consisted of level I and level II evidence, including systematic reviews, CPGs, and randomized control trials (RCTs) (Melnyk & Fineout-Overholt, 2019). The expert opinions have a clearly identifiable and credible source and have a central focus on the topic at
hand. Results from each article were similar, identifying the same screening tool used for assessment of postpartum depression and similar schedules for postpartum follow up, which will be discussed in the synthesis of evidence. Follow up care and interventions were also similar amongst all evidence. Most importantly, findings from the evidence can be applied to the local population and for use in the FNPs practice. Studies focus on the care of women in the perinatal period, in a women’s health or primary care setting. Plans of care that are discussed are also feasible and easily accessible.

**Construction of Evidence-based Practice**

**Synthesis of Critically Appraised Literature**

*Screening tools for detection of postpartum depression.*

A major trend found in the evidence was the use of screening tools for detection of postpartum depression amongst women (ACOG, 2018; Austin & Hightet, 2017; Che Abdullah, 2019; Edwards MPhil, 2020; Kendig et al., 2017; Kurtz et al., 2017; Learman, 2018; Maurer et al., 2018; Moore Simas et al., 2018; O’Connor et al., 2016; RNAO, 2018). Consistent screening with a validated tool is extremely important for detection and management of postpartum depression (Kendig et al., 2017). Each piece of evidence mentioned the utilization of screening tools used for the detection of postpartum depression, specifically the EPDS. The EPDS was the most widely used tool for the assessment of postpartum depression in women amongst most of the evidence chosen for synthesis (ACOG, 2018; Austin & Hightet, 2017; Che Abdullah, 2019; Edwards MPhil, 2020; Learman, 2018; Maurer et al., 2018; O’Connor et al., 2016). The EPDS was the most frequently used screening tool for screening for postpartum depression for several reasons. The tool is translated into 50 different languages, includes only 10 self-reported questions that are health literacy appropriate, takes less than five minutes to complete, and is a highly sensitive, valid tool (ACOG, 2018; Austin & Hightet, 2017; Kendig, 2017; Kurtz, 2017; Maurer et al., 2018).
Another screening tool frequently identified in the evidence for postpartum depression screening was the Patient Health Questionnaire-9 (PHQ-9) (ACOG, 2018; Austin & Highet, 2017; Che Abdullah, 2019; Edwards MPhil, 2020; Kendig et al., 2017; Kurtz et al., 2017; Learman, 2018; Maurer et al., 2018; O’Connor et al., 2016; RNAO, 2018). The PHQ-9 is also recommended for screening for postpartum depression because it is only 9 questions, is easily accessible, and has been validated in the perinatal population (ACOG, 2018; Che Abdullah, 2019; Kendig et al., 2017; Kurtz et al., 2017; Learman, 2018). However, the EPDS has been found to be more adequate at diagnosing postpartum depression than the PHQ-9 (Maurer et al., 2018).

The sensitivity and specificity of screening tools were discussed in the evidence to determine accuracy of tools for screening of postpartum depression (ACOG, 2018; Austin & Highet, 2017; Che Abdullah, 2019; Kendig et al. 2017; Kurtz et al., 2017; Learman, 2018; Maurer et al., 2018; O’Connor et al., 2016). According to Che Abdullah et al. (2019), the EPDS and Beck Depression Inventory (BDI) have the highest sensitivity out of the screening tools assessed with both having a sensitivity of greater than 80%, indicating high accuracy. ACOG (2018), Austin & Highet (2017), Kendig et al. (2017), Learman (2018), and O’Connor et al. (2016) also report sensitivity for the EPDS ranging from 59% to 100% and specificity ranging from 49% to 100%, depending on cutoff scores. Maurer et al. (2018) reports sensitivities and specificities of 80% to 90% for the EPDS. Overall, evidence shows that the use of a screening tool alone can have clinical benefits and early detection (through the use of screening tools) and management of postpartum depression can prevent possible harmful effects (ACOG, 2018). These harmful effects can include impaired growth and development of the newborn (Kurtz et al., 2017), increased risk of poor adherence to health care, poor nutrition, loss of financial resources, substance abuse, thoughts of suicide, and suicide (Kendig et al., 2017).

**Timing for screening and assessment.** Evidence shows that screening for postpartum depression with a validated tool should occur at least once during the postpartum period
(ACOG, 2018; Austin & Highet, 2017; Che Abdullah, 2019; Edwards MPhil, 2020; Kendig et al., 2017; Kurtz et al., 2017; Learman, 2018; Maurer et al., 2018; Moore Simas et al., 2018; O’Connor et al., 2016; RNAO, 2018). The postpartum period can be defined as the first 12 months following delivery (ACOG, 2018). According to Austin & Highet (2017), Learman (2018), Maurer et al. (2018), O’Connor et al. (2016), and RNAO (2018), screening postnataally should occur three to eight weeks after birth in the obstetric setting. Kurtz et al. (2017) recommends screening for postpartum depression at two weeks, two months, six months, and 12 months. The remainder of the evidence does not provide specific timing for screening but suggests screening at least once in the postpartum period (ACOG, 2018; Che Abdullah, 2019; Edwards MPhil, 2020; Kendig et al., 2017; Moore Simas et al., 2018). Evidence suggests waiting at least two weeks postpartum to screen for depression considering the symptoms of “postpartum blues” can last up to two weeks and can mimic symptoms of depression (Learman, 2018).

Follow up care for postpartum depression. The evidence also addressed different follow up practices for postpartum women following screening for depression. Austin & Highet (2017), Edwards MPhil (2020), Kurtz et al. (2017), and Learman (2018) recommend certain follow up practices based on screening scores. Cutoff scores for positive screenings differed amongst the screening tools and studies. Austin & Highet (2017) and Edwards MPhil (2020) recommend monitoring a patient with a score of 10-12 on the EPDS and repeating the screening in two to four weeks; specific ways to monitor these patients was not described. For a patient with a score of 10 or more, Kurtz et al. (2017) recommends further evaluation, timing of further evaluation was not specified, and planning an intervention or treatment plan, including frequent follow ups, ensuring adequate support systems, and referral to mental health professionals when necessary. According to Learman (2018), a cutoff score of 10 or greater and 12 or greater are the most commonly used threshold scores that indicate a positive screening. Following a positive screening, Learman (2018) also suggests further assessment of symptoms, addressing safety risks, screening for symptoms of mania and psychosis, and evaluating the
patient for conditions that can form depressive symptoms. In a universal screening program evaluated by Learman (2018), the obstetric care provider screened patients with a screening tool and treated women who screened positive. Referral to a mental health specialist was only done when clinically indicated, after assessment and diagnosis of postpartum depression (Learman, 2018). Edwards MPhil (2020) states that a one-time score of 13 or 14 in the postpartum period requires the primary care provider offer referral to an appropriate health professional, such as an OB/GYN or mental health care provider. The health care professional should ensure timely assessment and management by a mental health professional with a score of 15 or greater on the EPDS (Edwards MPhil, 2020).

Furthermore, Austin & Hight (2017) and Kurtz et al. (2017) recommend immediate intervention, based on local protocol/policy, with a positive response to question 10 on the EPDS regarding suicidal ideation. Austin & Hight (2017) and RNAO (2018) go into further detail on assessing the risk of suicide, including asking about suicidal thoughts and whether the patient has a detailed plan, such as a method and a means for that plan. The health care provider should also refer the patient for an urgent mental health assessment and consider support and treatment options, including a safety plan (Austin & Hight, 2017; RNAO, 2018). This safety plan should incorporate coping strategies, warning signs of imminent suicide, support persons in the woman’s life, resources for health professionals and agencies that can be contacted for help (Austin & Hight, 2017; RNAO, 2018). Kurtz et al. (2017) also suggests activation of local emergency services or notification of child welfare agencies for women who are suicidal or thinking about harming their infant. Kendig et al. (2017) recommends having an emergency referral protocol in place for suicidal and homicidal ideation that includes emergency psychiatric consult and collaboration of care between the health care provider and psychiatrist (Kendig et al., 2017).

Follow up recommendations and practices differed in the remaining studies (ACOG, 2018; Kendig et al., 2017; Maurer et al., 2018; O’Connor et al., 2016; RNAO, 2018; Simas et al.,
ACOG (2018), Kendig et al. (2017), RNAO (2018), and Simas et al. (2018) recommend coordination of care or referral to a mental health care professional for maximum benefit for women who screen positive for postpartum depression. A positive screening is based on the tool used and a cutoff value, which varies based on the clinic or provider (Kendig et al., 2017; RNAO, 2018). The health care professional in the OB/GYN setting should be prepared to initiate medical treatment and refer patients to appropriate behavioral health resources, or both (ACOG, 2018). Kendig et al. (2017) suggests development of a management algorithm for positive screening results by the maternity health care provider to facilitate appropriate interventions and referrals. Interventions include support from family and friends, psychotherapy, such as cognitive behavioral therapy (CBT), and strong consideration of initiating a selective serotonin reuptake inhibitor (SSRI) or a serotonin-norepinephrine reuptake inhibitor (SNRI) (Kendig et al., 2017). These interventions can be provided in the OB/GYN setting or in coordination with a mental health care provider (Kendig et al., 2017).

**Pharmacologic and alternative treatment for postpartum depression.** Following a positive screening and diagnosis of postpartum depression, pharmacologic and alternative treatment should be considered (ACOG, 2018; Austin & Highet, 2017; Kendig et al., 2017; O’Connor et al., 2016; RNAO, 2018). For women with moderate to severe postpartum depression, alternative treatment should be considered in addition to pharmacologic treatment, including CBT, exercise, time for self, and support from peers and family (Austin & Highet, 2017; Kendig et al., 2017; O’Connor et al., 2016; RNAO, 2018). First line pharmacologic treatment for moderate to severe postpartum depression is an SSRI (Austin & Highet, 2017; Kendig et al., 2017). There is high quality evidence to support the efficacy of SSRI antidepressants for treatment of postpartum depression and exposure to SSRIs through breast milk is very low (Austin & Highet, 2017). However, the potential risks of antidepressants should be discussed with the patient before initiation of medication (Austin & Highet, 2017; Kendig et al., 2017; O’Connor et al., 2016; RNAO, 2018).
SSRIs approved by the Food and Drug Administration (FDA) include citalopram, escitalopram, fluoxetine, paroxetine, and sertraline. According to Hale (2021), sertraline and escitalopram are preferred over other SSRIs for pregnant and breastfeeding women. Escitalopram and sertraline have been shown to be effective in treating postpartum depression and transfer of these medications through breastmilk is minimal (Hale, 2021). A suggested dose for escitalopram is 10 to 20 milligrams daily and a suggested dose for sertraline is 50 to 200 milligrams daily. Side effects for women taking these medications include headaches, dizziness, insomnia, diarrhea, and nausea (Hale, 2021). In a study on the use of escitalopram, no adverse events were reported in infants when their mothers were taking this medication while breastfeeding (Hale, 2021). Possible side effects of sertraline in an infant include sedation, irritability, not waking to feed or poor feedings, and weight gain (Hale, 2021).

**Recommendation for Best Practice**

Based on the evidence, the best practice to address the clinical problem was the use of the EPDS screening tool to detect postpartum depression (ACOG, 2018; Austin & Hight, 2017; Che Abdullah, 2019; Edwards MPhil, 2020; Learman, 2018; Maurer et al., 2018; O’Connor et al., 2016). The screening tool should be administered at the 2- or 6-week postpartum visit and reassessment and follow up will be based on initial screening scores (Austin & Hight, 2017; Learman, 2018; Maurer et al., 2018; and O’Connor et al., 2016). Screening should be done at the 2- or 6-week postpartum visit for convenience, considering most women are seen 2- to 6-weeks after delivery. A cutoff score of 10 or greater will be used for further assessment (Austin & Hight, 2017; Edwards MPhil, 2020; Kurtz et al., 2017; and Learman, 2018).

A treatment plan should be discussed for women who have a score of 10 or greater and the patient should be rescreened with the EPDS in 2 to 4-weeks (Austin & Hight, 2017; Edwards MPhil, 2020). This treatment plan should include appropriate support systems, resources, and the possibility of pharmacologic treatment, if deemed necessary by the patient and health care provider (Women’s Health Nurse Practitioner or OB/GYN) (ACOG, 2018; Austin
Pharmacologic treatment should include an SSRI for treatment of postpartum depression (Austin & Hight, 2017; Hale, 2021; Kendig et al., 2017). If the EPDS score remains high with the second screening, a change in treatment may need to be made, including strong recommendation for referral to a mental health care provider (ACOG, 2018; Kendig et al., 2017; Moore Simas et al., 2018; RNAO, 2018). A protocol should be put in place at the clinic to ensure initiation of the above recommendations for best practice.
CHAPTER 3

IMPLEMENTATION OF PRACTICE CHANGE

The implementation of the practice change took place in an obstetrical/women’s health care setting in Munster, Indiana. Key stakeholders were involved in each step of the practice change. These key stakeholders included RNs at the clinic, the OB/GYN, the nurse practitioner, and the DNP student. The practice change included a protocol for screening all women at 2- or 6-weeks postpartum that described, in detail, the steps for implementation of the practice change. Refer to appendix C for the protocol. All participants signed a project consent form, completed a demographic form, and received a patient education handout with information on how to detect and manage symptoms of postpartum depression at the beginning of their 2- or 6-week postpartum visit. Refer to appendix A for the patient education handout. The receptionists administered the EPDS in paper format to all postpartum women at their 2- or 6-week postpartum checkup for both post-cesarean section and post-vaginal delivery patients. The RN’s entered the paper form into each patient’s chart electronically. Results of the screening were interpreted by the OB/GYN physician who referred to the protocol for screening and appropriate follow up and treatment. The protocol included guidance on when to screen, who to screen, and information on the EPDS tool. A cutoff score, timing for follow up, referral recommendations, pharmacologic and alternative treatment, guidance on suicide assessment, and emergency services information were also included in the protocol. The protocol stated that administration with a paper form of the EPDS will be done by the receptionist and results of screening will be entered into the patient’s chart by the RN. The results of the screening were reviewed by the provider with the patient and follow up and treatment were determined. Follow up for a positive screening was scheduled for four weeks after the initial screening and the provider encouraged those with a positive screening to engage in alternative therapies, as discussed in the patient education handout. Treatment options following a positive screening and diagnosis of postpartum depression included prescription by the physician of an SSRI,
referral to a behavioral health clinic or mental health care provider, referral for CBT, education on exercise regimens, advice on how to create time for self, and ensuring the patient has support from others. The protocol also included how to assess for women who are at risk for suicidal and/or homicidal ideation. This assessment included inquiring about feelings of suicidal/homicidal ideation, assessing whether or not the patient responded yes to question 10 on the EPDS, and assessing patient and infant safety and the patient’s support system. For women who are at high risk of suicide, as explained in the protocol, the provider would arrange for an emergency psychiatric consult or contact 911 for transfer to a nearby emergency department or psychiatric unit.

Participants and Setting

The participants taking part in this practice change included key stakeholders and patient participants at the clinic. Key stakeholders included RNs at the clinic, an OB/GYN physician, a nurse practitioner, and patients at the clinic. The OB/GYN physician has been in practice for 22 years, specializing in obstetrics and gynecology. The nurse practitioner is a family nurse practitioner (FNP) and has been in practice for six years. Patients taking part in the practice change included women of all ages and ethnicities who were at least 2 weeks into the postpartum period following birth. Those who were ineligible included pregnant women and women who were not in the postpartum period.

The clinic was an obstetrics and gynecology women’s health clinic with one physician and one nurse practitioner, as well as RNs and secretarial staff. The area in which the clinic was located, Munster, Indiana, had an estimated population of 22,476 with 50% of the population being female persons (United States Census Bureau, 2019). The nurse practitioner conducted about 48 patient visits a week, and the physician conducted about 80 patient visits a week (K. Castillo, personal communication, July 28, 2021), which amounts to about 500 patients a month or 6,000 patients a year. In 2011, 15,794 United States physicians specializing in obstetrics and gynecology were surveyed for a compensation report that found about 50% of these physicians
saw 50-99 patients a week. Considering these data, the clinic where the project took place is on average with other clinics in the US regarding the number of patients seen per week.

**Pre-Intervention Group Characteristics**

Demographic information was collected on patients seen in the clinic for a 2- or 6-week postpartum visit prior to initiation of the project from February 23rd, 2021, to July 7th, 2021. Of the 39 patient charts reviewed, 10 patients were of African American race, 15 patients were Caucasian, one patient was Asian and African American, 10 patients were of Hispanic ethnicity, and three patients did not have a race or ethnicity listed. Ages of patients ranged from 19 years old to 44 years old. One patient from the original chart audit was diagnosed and treated for postpartum depression, a 20-year-old African American female. Patient demographics were collected on project participants during implementation and findings were compared with pre-intervention data.

**Intervention**

To prepare and plan for the intervention, several steps were implemented. A detailed protocol was made to identify patients with postpartum depression and provide appropriate follow up care. Key stakeholders were educated about the project and intervention. Provider education included in the protocol took place prior to the implementation phase of the project. A provider education handout was made available to staff in addition to a group, one-hour in-person education session provided by the project leader. The education included how to administer and interpret results of the EPDS. Appropriate timing for follow up and treatment was discussed for women screened positive and were diagnosed with postpartum depression. Specific treatment options including prescription of an SSRI and resources for alternative treatment were discussed with the providers. Education about how to assess for risk of suicide and the steps to follow for women at risk was provided. While the RNs, physician, and nurse practitioner at the clinic were familiar with the screening tool being utilized, an overview of the EPDS was provided prior to implementation. Paper copies of the EPDS were made and on
hand at the clinic for the receptionists to administer. The RNs also received an overview on where and how to enter each patient’s EPDS score into their chart. This information was also included in the protocol in more detail, which was readily available to staff and providers. Refer to appendix B for the provider education handout.

The practice change involved administration of the EPDS to all women at their 2- or 6-week postpartum checkup. A paper form of the EPDS was completed by each participant and results were entered into their chart by the RN. The physician then interpreted results and discussed them with the participant. A cutoff score of 10 was used for a positive screening for postpartum depression. For participants with a score of 10 or greater on the EPDS, the provider determined a diagnosis of postpartum depression, based on symptoms and clinical judgement. A 4-week follow up visit was scheduled for any participant with a positive screening (a score of 10 or greater) who was not diagnosed with postpartum depression, and reassessment of the participant took place. Pharmacologic and alternative treatment were discussed at the 2- or 6-week postpartum visit with the participant if they screened positive and were diagnosed with postpartum depression. If the provider and the participant decided on pharmacologic treatment, the provider was to prescribe an SSRI. SSRIs that are recommended most often for treatment of postpartum depression include sertraline and escitalopram (Hale, 2021) because they have less reported side effects and transfer of these medications through breastmilk is minimal (Hale, 2021). Alternative treatment options discussed with the participant included CBT, exercise, time for self, and support from peers and family (Austin & Highet, 2017; Kendig et al., 2017; O’Connor et al., 2016; RNAO, 2018). The participant who was diagnosed with postpartum depression was scheduled to follow up with the provider in two weeks. A handout was given to participants with specific interventions for exercise, time for self, and support from peers and resources for where to receive CBT as part of alternative treatment. The number for the National Suicide Prevention Lifeline and education on what to do when having suicidal thoughts was also included in the handout as well. For a participant with a positive answer to question
number 10 on the EPDS, the provider was to arrange for an urgent mental health assessment with a mental health care provider and activate the local emergency services, if necessary, based on the participant’s risk of suicide (Austin & Hightet, 2017; Kendig et al., 2017; Kurtz et al., 2017; RNAO, 2018). If a participant was at high risk of suicide, activation of local emergency services included calling 911 for transfer to the emergency department. A list of mental health care providers in the area were readily available for the providers to refer to as well as a list of nearby emergency departments if activation of local emergency services was warranted.

Comparison

Current practice in the clinic for screening of postpartum depression did not follow evidence-based research and practice. Screening for postpartum depression was done by the physician and this included asking questions at the postpartum visit, rather than screening with a validated tool as suggested in the evidence. An audit of electronic medical record (EMR) charts done for a 4½ month period from February 23rd, 2021, to July 7th, 2021 found that 2.5% of patients seen for their 2- or 6-week postpartum visit by the physician at the clinic were screened with the EPDS after the patient reported depressive symptoms. The clinic did not have a protocol or plan in place to follow when a patient screens positive for postpartum depression or suicidal ideation.

Outcomes

The number of patients screened with the EPDS after implementation of the project was evaluated as the primary outcome. The primary outcome was measured as a frequency. The number of patients screened with the EPDS prior to implementation was assessed and compared to the number of patients screened with the EPDS after implementation. A change in the detection rate of postpartum depression within the clinic was evaluated as the secondary outcome using the EPDS. Although the EPDS is a valid and reliable tool to screen for and detect postpartum depression (Che Abdullah, 2019), it was not used alone to diagnose postpartum depression. Patient symptoms and the provider’s clinical judgment, along with a
positive screening with the EPDS, constituted a diagnosis. To ensure providers were knowledgeable about screening and diagnosing a patient with postpartum depression, education was provided on specific risk factors and symptoms that are consistent with a diagnosis of postpartum depression. Participant demographics were collected by having each participant fill out a demographics form. A code sheet was created with participant names and a code number assigned to each. This code number was used on the paper EPDS form and the demographic form to link the data collected from these two forms. A chi-square test was used to determine if there was a significant difference in screening and detection of postpartum depression after implementation of the project.

Time

Project implementation began after the start of the Fall semester, in mid-September. Provider and staff education took place on September 30\textsuperscript{th}, 2021, one week prior to implementation. The in-person education session held by the project leader was done in a group setting, including all staff and providers, and took about one hour. Implementation of the project was projected to take place for 12 weeks. However, to recruit more participants, the implementation phase and data collection took 19 weeks.

Protection of Human Subjects

Research ethics training was completed prior to the start of this EBP project through the Collaborative Institutional Training Initiative program. To maintain participant anonymity and confidentiality, each participant was assigned a code number and the DNP student was the only person with access to the code sheet. The code sheet with participant names and code numbers did not leave the clinical site and was kept in a locked file cabinet in the providers’ office. Code numbers were placed on each participant’s paper EPDS form and demographic sheet to link the participant’s EPDS to their demographics.
CHAPTER 4

FINDINGS

The purpose of this EBP project was to improve screening and management of postpartum depression using the EPDS screening tool and a protocol for appropriate treatment and follow up care. The number of participants screened with the EPDS comprised the primary outcome and was measured as a frequency. The secondary outcome of detection rates of postpartum depression was measured by EPDS scores of 10 or greater. Additionally, the impact of demographic variables on EPDS scores was measured as another secondary outcome. Statistically significant differences were found between the preintervention and postintervention groups for the primary outcome of the project. The secondary outcome of detection rates of postpartum depression was not statistically significant between the preintervention and postintervention groups. The secondary outcome of impact of demographic variables on EPDS scores was statistically significant for the variable of age between the preintervention and postintervention groups.

Participants

The postintervention group that participated in the EBP project consisted of postpartum women of varying races and ethnicities, ages 18 to 44. The preintervention and postintervention groups had similar demographic characteristics and the postintervention group was reflective of the entire patient population. An independent t-test determined there was no statistically significant different in age ($p = .793$) between the preintervention and postintervention groups. A chi-square test determined there was no statistically significant difference in race ($p = .112$) between the preintervention and postintervention groups. The population of women in both groups was racially diverse, representing the entire population. Races and ethnicities identified amongst both groups include African American, White, Hispanic, and Asian. Of the women in the preintervention group, 28% were African American, 38% were White, 26% were Hispanic, and 8% did not have a race or ethnicity listed. Of the women in the postintervention group, 22%
were African American, 46% were White, 2% were Asian, and 30% were Hispanic. These percentages show similarities of races amongst the two groups. A chart audit was done on 39 postpartum women for data collection, or the preintervention group, and the postintervention group comprised of 18 postpartum women who participated in project implementation. Of the 34 women who were seen for a postpartum visit during the implementation phase, 18 of them participated. One provider, a nurse practitioner, did not participate because she did not have any postpartum visits during project implementation. Refer to table 4.1 for demographic characteristics of the preintervention and postintervention groups. Refer to appendix F for the patient demographic form completed by all project participants.
Table 4.1

*Demographic Characteristics*

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Postintervention Group</th>
<th>Preintervention Group</th>
<th>Total</th>
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<th>$X^2$</th>
<th>$p$</th>
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<tr>
<td></td>
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<td>n = 39</td>
<td>N = 57</td>
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</tr>
<tr>
<td>Age (mean)</td>
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<td>.793</td>
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<tr>
<td>Race</td>
<td></td>
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<td>.112</td>
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<td>African American</td>
<td>22%</td>
<td>26%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>46%</td>
<td>38%</td>
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<td></td>
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<tr>
<td>Asian</td>
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<td>0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>30%</td>
<td>26%</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Other</td>
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<tr>
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<td>High school</td>
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<tr>
<td>Some college</td>
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<tr>
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<tr>
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<td>Part time</td>
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<td>Unemployed</td>
<td>44%</td>
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<tr>
<td>Married</td>
<td>67%</td>
<td></td>
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<tr>
<td>Single</td>
<td>33%</td>
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<td></td>
</tr>
<tr>
<td>Alcohol use</td>
<td>6%</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>History depression</td>
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<tr>
<td>None</td>
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</tbody>
</table>
Changes in Outcomes

Implementation of the EPDS screening tool made a statistically significant difference for screening rates between the preintervention and postintervention groups. Data analysis of the secondary outcome of detection rates of postpartum depression was not able to be ran because of the small sample size. The effect of demographic variables on EPDS scores was also analyzed as a secondary outcome. The variable of age significantly affected EPDS scores. The variables of race, job status, marital status, education level, and social history did not affect EPDS scores.

Statistical Testing and Significance

Data were analyzed using the Mann-Whitney test, chi-square test of independence, and a simple linear regression to determine if there was a significant increase in screening rates of postpartum depression between the preintervention and postintervention groups and if demographic variables affected EPDS scores. The chi-square test of independence was an appropriate statistical test for examining nominal variables of race, job status, marital status, and social history because there were two independent groups, and the outcomes were measured as frequencies (Cronk, 2018). The Mann-Whitney test was an appropriate statistical test for examining ordinal variables of age and education level because there were two independent groups (Cronk, 2018). A simple linear regression was used to determine if demographic variables had an impact on final EPDS scores and this was an appropriate test to allow prediction of one variable from another variable (Cronk, 2018).

Findings

Primary Outcome

Screening Rates with EPDS. Screening rates for postpartum depression using the EPDS tool increased significantly in the postintervention group compared to the preintervention group. Prior to project implementation, 2.6% of patients (1 out of 39) seen for a postpartum visit were screened with the EPDS tool. During the implementation phase, 52.9% of patients (18 out
of 34) seen for a postpartum visit were screened with the EPDS tool. There was a 50.3% increase in screening rates using the EPDS as a result of this EBP project.

**Secondary Outcome**

**Detection Rates of Postpartum Depression.** Data analysis on the secondary outcome of detection rates of postpartum depression was not possible due to the small number of participants diagnosed with postpartum depression in the preintervention and postintervention groups. However, only one patient seen for a postpartum visit in the preintervention group was diagnosed with postpartum depression as opposed to two participants in the postintervention group as a result of using the EPDS tool. Therefore, there was a 100% increase in detection rates of postpartum depression as a result of project implementation.

**Demographic Variables and EPDS Scores.** When analyzing demographic variables to determine if there was a statistically significant difference between participants who had an EPDS score of less than 10 versus those who had an EPDS score of greater than 10, the variable of age was statistically significant ($p = .048$). The variable of education level was not statistically significant ($p = .639$). These data were analyzed using the Mann-Whitney Test.

When determining if demographic variables impacted the final EPDS scores, the variable of age was statistically significant ($p = .044$), affecting the final EPDS score. The variables of education level, job status, race, marital status, and social history were not statistically significant. These data were analyzed using a linear regression. After using backward regression to look at demographic variables and their effect on final EPDS scores, the variables of age ($p = .005$) and education level ($p = .037$) were both statistically significant and are the best predictors of EPDS scores. After further analyzing the data, women with the highest EPDS scores were in their middle 30s and had at least a high school level diploma.
Figure 4.1

EPDS Screening Rates

<table>
<thead>
<tr>
<th>Group</th>
<th>Percentage Screened with EPDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preintervention</td>
<td>2.6</td>
</tr>
<tr>
<td>Postintervention</td>
<td>52.9</td>
</tr>
</tbody>
</table>
CHAPTER 5
DISCUSSION

This EBP project was implemented to improve screening and management of postpartum depression using the EPDS screening tool and a protocol for appropriate treatment and follow up care. Demographic variables were collected on project participants and the EPDS tool was administered to properly screen for postpartum depression at 2- or 6-week postpartum visits. A data analysis was performed to determine if there was a difference in screening and detection rates of postpartum depression using the EPDS between the preintervention and postintervention groups, and if demographic variables affected EPDS scores of participants in the postintervention group. Findings from this EBP project and how they are linked to the role of the doctorally prepared nurse will be discussed.

Explanation of Findings

Primary Outcome
There was a significant change in screening rates using the EPDS between the preintervention and postintervention groups. Amongst the women who were seen for a postpartum visit during the implementation phase of the project, 52.9% of women were screened with the EPDS and were participants in this EBP project. A chart audit of women seen for a postpartum visit prior to implementation of this EBP project (preintervention group) reveals only 2.6% of women seen for a postpartum visit were screened with the EPDS. Therefore, the primary outcome to increase screening rates for postpartum depression was met by using the EPDS and implementing this EBP project. According to the literature, assessing for postpartum depression with an appropriate tool is crucial to properly screen for and detect postpartum depression (ACOG, 2018; Austin & Hightet, 2017; Che Abdullah, 2019; Kendig et al. 2017; Kurtz et al., 2017; Learman, 2018; Maurer et al., 2018; O’Connor et al., 2016). Screening with a tool such as the EPDS allows for early detection and management of postpartum depression to prevent harmful effects of this common mood disorder (ACOG, 2018).
Secondary Outcomes

Detection Rates of Postpartum Depression

Statistical testing was not possible to determine if there was a difference in detection rates between the preintervention and postintervention groups due to the small number of positive screenings in both groups. Prior to implementation, one woman in the preintervention group was screened using the EPDS and postpartum depression was detected. During implementation of this EBP project, postpartum depression was detected in two participants as a result of screening with the EPDS. There was a 100% increase in detection rates of postpartum depression after implementation of this EBP project, assuming the EPDS had an impact on detection rates of postpartum depression amongst this group of women. According to the literature, the EPDS is a highly accurate and reliable tool to detect postpartum depression early (ACOG, 2018; Austin & Highet, 2017; Che Abdullah, 2019; Kendig et al. 2017; Kurtz et al., 2017; Learman, 2018; Maurer et al., 2018; O’Connor et al., 2016).

The physician followed the protocol to educate participants who had positive screenings (EPDS score of 10 or greater) about follow up screening and how to manage these symptoms at home or with treatment. The physician further discussed symptoms each participant was experiencing, and they denied any thoughts of harming oneself or others. Both participants declined treatment at that time. They were instructed to follow up in 4 weeks for repeat screening with the EPDS and to discuss any symptoms they might be having at that time. Both participants were also instructed to refer to the patient education handout they received for information on how to manage symptoms of postpartum depression at home and call the clinic with any questions or concerns prior to their follow up visit.

Demographic Variables and EPDS Scores

After analyzing the data, the variable of age had a statistically significant impact on EPDS scores. The variable of age effects if the EPDS score will be greater than or less than 10, with 10 or greater indicating a positive screening, and the overall EPDS score itself. After further
analyzing the data, participants ages 18 to 33 had EPDS scores between 1 and 5 compared to those in their middle 30s with the highest scores of 11 and 18. This suggests women in their mid 30s are at higher risk of postpartum depression. However, this may not be a valid or reliable finding considering only two participants scored 10 or greater. These findings are not consistent with the literature. According to the literature, risk factors for postpartum depression include a personal and/or family history of depression, diagnosis of bipolar disorder, postpartum depression with previous pregnancy, stressful life events, having a child with special needs, having multiples, an inadequate support system, financial problems, and an unplanned/unwanted pregnancy (MFMER, 2018). Age and education level were not found to be risk factors. If these findings were consistent with the literature, the variables of job status, marital status, and social history would have significantly affected EPDS scores. The participant with an EPDS score of 11 did have a history of depression and was not married, which are both risk factors for postpartum depression. This finding was not statistically significant because only two women had an EPDS score of 10 or greater.

**Strengths and Limitations of the DNP Project**

**Strengths**

A major strength of this EBP project was the increase in the use of the EPDS to screen for postpartum depression between the preintervention and postintervention groups. There was a 50.3% increase in screening rates using the EPDS after implementation of this EBP project. The EPDS is a very simple and cost-effective way to screen for postpartum depression. This screening tool takes minimal time to complete by the patient and is an effective way to detect postpartum depression early and treat appropriately. The physician and staff at the women’s health clinic also agree that the EPDS is a very efficient and easy way to screen for postpartum depression.

Another strength of this project was the ease of recruiting participants. Recruitment and screening of participants took place at the same time for those who consented to participate in
the project. Participants were able to fill out the consent form, demographic form, and the EPDS at the same time while waiting to see the provider. The patient education handout was also given at this time for the participant to look over and take home for reference. This handout was a great reference for participants to learn more about postpartum depression and when to consult with their healthcare provider at a postpartum visit and/or in the future.

Providing a protocol to the healthcare providers at the women’s health clinic for screening and follow up management for postpartum depression was also a strength of the project. The protocol was a great way for providers to consistently screen for postpartum depression and appropriately treat patients when necessary. Multiple evidence-based treatment options were listed on the protocol for providers to follow, along with how to treat those with suicidal ideation.

This EBP project was successful because of the dedication of the project site facilitator and staff that recruited participants and administered the EPDS forms, which is also identified as a major strength. The project site facilitator often encouraged or reminded staff to recruit participants and staff made sure to comply. After being out of the office with COVID-19, the receptionists made sure to get right back on track with implementation of the project upon their return. The staff and project site facilitator were very cooperative with the extension of project implementation to recruit more participants and worked hard until the end.

Limitations

Limitations were encountered throughout the implementation phase of this EBP project and were addressed accordingly. Staff-related factors arose rather quickly during implementation. The RN that was to administer the EPDS paper forms along with patient consent and demographic forms was not cooperative with this process. She insinuated that she did not have the time to administer these forms while also rooming patients for the physician and nurse practitioner visits. To address this issue, the project leader spoke with the receptionists at the front desk to discuss an easier route for administration of these forms. The
receptionists were very open to changing the process of implementation and administering the forms to patients. The receptionists explained project implementation to women being seen for a postpartum visit and asked for their consent to participate in the project. After consent was received, participants were given the EPDS form and demographic form to fill out prior to seeing the physician. However, an unexpected confounding factor occurred with the receptionist staff. During the Winter break, both receptionists contracted COVID-19 and were out of the office for several weeks. Due to their absence, very few patients were recruited for participation in the EBP project during this time. Unfortunately, there was no way to fully address this unexpected confounding factor rather than to recruit as many participants as possible for the project after the receptionists returned. Having to rely on staff to recruit participants for this project was also a limitation for these reasons.

**Sustainability**

After implementing the project at the clinical site, the project leader had a conversation with the physician and nurse practitioner at the site to ensure they were interested in sustaining the project and they agreed. Outcomes of this EBP project were then shared with the staff at the clinic to show the importance of implementing and sustaining this practice change. A meeting was held between the project leader and the staff, including the physician and nurse practitioner, to make sure staff would consistently administer the EPDS tool to all postpartum women at their 2- or 6-week postpartum visit to sustain the new practice of this EBP project. The staff were reminded of the ease and importance of screening with the EPDS. To maintain this practice change without the presence of the project leader, the EPDS paper forms will remain with the receptionists at the front desk in a folder directly next to the computers to handout while checking the patient into the computer system. The patient will complete the EPDS form while waiting to see the physician. The physician will then make sure postpartum patients completed the EPDS form prior to starting their visit. The project leader also suggested posting flyers in the clinic waiting room and on exam room doors, prompting postpartum women
to ask about depression screening if they have not yet received the EPDS form. These suggestions will help sustain this practice change. Refer to Appendix G for this flyer.

**Relevance for EBP Model**

The JHNEBP model was very useful for guiding this EBP project. The three-step process of identifying a practice question, searching for evidence, and translating EBP into practice was helpful for all stages of this project. The model also incorporates internal and external factors to consider when implementing a practice change. These components of the JHNEBP model were most helpful and aligned well with the project. Prior to implementation, the project leader met with the project site facilitator to identify a needed practice change for the clinical site and the project leader identified a practice question. After identifying a needed practice change, the project leader did an extensive literature search and selected evidence appropriate for the EBP project. The evidence was appraised and revealed evidence was of good or high quality. Findings were then synthesized to create a protocol. Specific recommendations for the practice change were identified and a plan for implementation of the EBP project was determined. To guide project implementation, the translation step of the PET process, best practices, and practice improvements were helpful components of the model. The plan included translating evidence into practice at the clinical site to improve screening and follow up management for postpartum depression. Best practices were identified in the evidence and were utilized to create a plan for implementation and improve current practice at the women’s health clinic.

After starting the implementation phase of the project, internal factors were considered and identified throughout this phase, including issues with staffing and environmental factors. As discussed previously, the RN that was to recruit participants and administer EPDS forms was not cooperative with project implementation. This was an internal factor of staffing issues. The environmental factor that influenced project implementation was COVID-19. Both receptionists that were to recruit participants and administer EPDS forms were ill with COVID-19 during
project implementation, which influenced the recruitment of participants. The project leader was prepared for these internal factors and addressed the accordingly. It is evident the JHNEBP model was useful throughout this EBP project.

External factors were also identified as a result of using the JHNEBP model as a guide. The external factor of standards applies to this EBP project. Standards of care were not being met at the clinical site prior to implementation of this project. This lack of standards was the motivation for this EBP project. Standards of care are extremely important for practice. They are the guidelines all healthcare providers must follow to ensure patient safety and quality care. As a result of this EBP project, standards of care for screening and follow up for postpartum depression were met and will continue to be met at this women’s health clinic by sustaining this practice change.

Although several components of the JHNEBP model were helpful for this EBP project, there were some parts to the model that were not useful. Because this EBP project was not a research project, the research portion of the model was only helpful when searching for evidence related to the practice change.

**Recommendations for the Future**

This EBP project provided consistent screening for postpartum depression, a protocol for screening and management of postpartum depression, and patient and provider education. Implications for the future regarding practice, research, and education will be discussed.

**Research**

Further research is necessary to further identify risk factors for postpartum depression. Maternal age, race, and education level are potential characteristics that could affect EPDS scores and increase risk for postpartum depression, along with employment/financial status, support systems, and social history as already identified in the literature. Data analysis from this EBP project determined that age and education level have a correlation with EPDS scores. Although race did not affect EPDS scores in this EBP project, there is currently not enough
literature to determine if race affects EPDS scores and risk for postpartum depression. Further research is necessary to determine if maternal age, race, and education level affect EPDS scores and risk for postpartum depression. To build knowledge on this intervention, research is needed on the use of the EPDS in women’s health clinics specifically. The literature concluded that postpartum depression screening should occur in settings such as primary care, obstetrics, and pediatrics and the EPDS was the most common and valid tool for use (ACOG, 2018; Austin & Highet, 2017; Che Abdullah, 2019; Edwards MPhil, 2020; Learman, 2018; Maurer et al., 2018; O’Connor et al., 2016). However, limited evidence was found that focused on the use of the EPDS in women’s health clinics.

**Practice**

Despite being years into the pandemic, this EBP project was greatly affected by COVID-19. Recommendations for future practice and similar projects would be to conduct the project or practice change when there would be less risk for challenges and restrictions due to the pandemic. It is also recommended for future EBP projects and practice changes that the project or practice change leader recruit participants for the project, rather than relying on staff for recruitment. Recruitment of participants should be separated from project implementation. This could be done by making phone calls ahead of time to women who are scheduled for a postpartum visit to explain the EBP project and ask for consent to participate at their future visit. To further improve positive outcomes of a practice change, it is recommended that the project leader or practice change leader ensure staff are fully cooperative prior to implementing the practice change at that clinical site.

**Education**

Considering this EBP project was successful in increasing screening rates using the EPDS, the project site opted to continue the intervention. It is necessary to continue educating the staff on the importance of this intervention to ensure they are compliant with giving all postpartum patients the EPDS form prior to seeing the provider. The providers should also
ensure staff are continuing the intervention by making sure with each postpartum patient that they received and completed the EPDS form. Undergraduate and graduate nursing students should be educated on the topic of postpartum depression, including how to screen for and treat this condition. Undergraduate and graduate students should also be knowledgeable on how to educate postpartum women about the risk factors and symptoms of postpartum depression and what to do if experiencing symptoms.

**Conclusion**

The results of this EBP project determined that screening for postpartum depression with the EPDS tool is feasible, cost-effective, and simple. Using this tool to screen for postpartum depression allows for early detection and management of this mental health condition to prevent potential harm to the mother and her family. Administering the EPDS form to postpartum patients takes minimal effort from the staff and can be filled out by the patient in minutes. The use of a detailed protocol assisted providers in the screening and management of postpartum depression. The goal of this EBP project is to sustain the intervention of administering the EPDS tool to 100% of postpartum patients at this women’s health clinic. It is recommended that all postpartum women are screened with a valid and reliable tool, such as the EPDS, at their postpartum visit.

In conclusion, the primary outcome to increase postpartum depression screening with the EPDS was achieved. A 50.3% increase in EPDS screening rates was seen after implementation of this EBP project. Achieving an EPDS screening rate of 100% would facilitate early detection and treatment of postpartum depression. If left undetected and untreated, postpartum depression can have devastating effects, including maternal death (ACOG, 2018; Austin & Highet, 2017). Death from maternal suicide exceeds maternal death from postpartum hemorrhage and hypertensive disorders (ACOG, 2018). Considering these statistics, it is extremely important postpartum women are properly screened for depression with a valid and reliable tool, such as the EPDS.
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BIOGRAPHICAL MATERIAL

Mrs. Matusik graduated from Purdue University Northwest with a bachelor's degree in the science of nursing in 2016. She works in a mother/baby unit at a community hospital near home where she has been practicing as a registered nurse (RN) for over five years. This is where her passion for women's health started. In 2019, Mallory decided to attend the graduate program at Valparaiso University for her doctorate in nursing practice (DNP) degree. She has completed over 560 clinical hours in various fields of practice including cardiology, women's health, pediatrics, and family practice throughout the course of the doctoral program. Mallory submitted the abstract for her DNP project to the Research, Evidence-Based Practice, and Performance Improvement in Healthcare Conference at the University of Southern Indiana College of Nursing and Health Professions. After her abstract was accepted, she attended the conference on April 20th, 2022, and presented on the topic of postpartum depression screening and follow up. Mallory has an interest in women's health with a focus on postpartum mental health. She looks forward to providing quality care through evidence-based practice as a future family nurse practitioner.
ACRONYM LIST

ACOG: American College of Obstetricians and Gynecologists
AGREE: Appraisal of Guidelines for Research and Evaluation
AHRQ: Agency for Healthcare Research and Quality
AWHONN: Association of Women’s Health, Obstetric and Neonatal Nurses
BDI: Beck Depression Inventory
CASP: Critical Appraisal Skills Programme
CBT: Cognitive Behavioral Therapy
CINAHL: Cumulative Index to Nursing and Allied Health Literature
CPGs: Clinical Practice Guidelines
DNP: Doctor of Nursing Practice
EBP: Evidence-based practice
EMR: Electronic Medical Record
EPDS: Edinburgh Postnatal Depression Scale
FNP: Family Nurse Practitioner
JBI: Joanna Briggs Institute
JHNEBP: Johns Hopkins Nursing Evidence-Based Practice
MFMER: Mayo Foundation for Medical Education and Research
OB/GYN: Obstetrician/gynecologist
PET: Practice Question, Evidence, Translation
PHQ-9: Patient Health Questionnaire-9
PICOT: Practice, implementation, comparison, outcome, timing
PPD: Postpartum depression
PRISMA: Preferred Reporting Items for Systematic Reviews and Meta-Analysis
RCTs: Randomized Controlled Trials
RN: Registered Nurse
RNAO: Registered Nurses’ Association of Ontario
SNRI: Serotonin-Norepinephrine Reuptake Inhibitor
SSRI: Selective Serotonin Reuptake Inhibitor
SPSS: Statistical Package for Social Sciences
TRIP: Turning Research into Practice
APPENDIX A

Patient Education Handout

Understanding and Managing Postpartum Depression

- What is postpartum depression? Postpartum depression is a common mood disorder that can occur up to 1 year after giving birth.

- What are symptoms of postpartum depression?
  - Depressed mood and/or agitation
  - Decreased pleasure/interest in activities
  - Significant weight loss or weight gain
  - Difficulty sleeping at night or sleeping too much at night/during the day
  - Fatigue or decreased energy
  - Feelings of hopelessness or worthlessness
  - Recurring thoughts of death or suicide

- How can you manage postpartum depression at home?
  - Exercise
    - Walking, yoga, light weight training, bicycle rides, swimming once bleeding has stopped
  - Time for self
    - Ask for help from partner/family/friends
    - Write in a journal
    - Read a book
    - Rest when the baby is napping/sleeping
  - Support from peers
    - Talk to and spend time with family and friends, seek help or advice from peers

- What are suicidal thoughts/being suicidal?
  - Recurrent thoughts of death or harming yourself
  - Thinking about a plan to carry out the act of suicide
  - Having the means to carry out the act of suicide (gun, pills, etc.)

- What to do when you are having suicidal thoughts
  - Tell your doctor/nurse practitioner if you are at the office
- Call the National Suicide Prevention Lifeline number: 1-800-273-8255 or text the Crisis Text Line by texting HELLO to 741741
- If you plan to attempt suicide, call 911 immediately
• DNP project will begin 9/20/2021 with plans to end 12/13/2021, however standard of care will continue with screening with the EPDS

• Screening will be done at 2 or 6-week postpartum visit for all women using the EPDS
  o A paper form of the EPDS should be completed only by the patient by checking off the response that comes closest to how she is feeling
  o The EPDS scores from each question should be added and a final score should be calculated by the physician or NP
  o EPDS results should be entered into each patient chart

• Diagnosis of postpartum depression will be made based on the provider’s clinical judgment, patient symptoms, and an EPDS score of 10 or greater
  o DSM-5 criteria for depressive disorder
    ▪ 5 or more of the follow symptoms present during 2 consecutive weeks
      • Depressed mood most of the day, nearly every day; markedly decreased interest in all or almost all activities most of the day; significant weight loss or weight gain; insomnia or hypersomnia nearly every day; psychomotor agitation nearly every day; fatigue nearly every day; feelings of worthlessness nearly every day; recurrent thoughts of death, recurrent suicidal ideation without a plan, or a suicide attempt or a specific plan

• Treatment
  o Treatment with an SSRI has been shown to be effective in treating postpartum depression with minimal side effects and transfer through breastmilk
    ▪ Examples of SSRIs include escitalopram and sertraline
    ▪ Patient should be started on a low dose and the dose can be increased by the provider as needed
  o Alternative treatment options will be provided to patients such as therapy (CBT), exercise, time for self, and support
• Patient should be referred out for CBT to a local therapist (a list of these will be provided for office staff)
• Examples of exercise can include walking, yoga, light weight training, swimming once bleeding has ceased, and cycling

• Follow up- for a patient who is diagnosed with postpartum depression and treatment has been initiated, follow up should occur in 4 weeks

• Risk for suicide
  o Positive response to #10 on EPDS
  o Suicidal thoughts
  o Suicide plan, method, means to carry out plan

• What to do when a patient is at risk for suicide
  o Emergency psychiatric consult
  o Activation of emergency services if a patient expresses she is suicidal and has expressed that she has a method and a means to carry out suicide plan (calling for emergency transportation to psychiatric unit/hospital)

• How to assess for suicidal intent
  o Ask patient at risk if she is currently thinking about or has recently thought about death or harming herself
  o Does the patient have a plan; if so ask the patient what her plan is
  o Does the patient have access to the method (guns, pills, poison) if she has a current plan and means
  o Does the patient have intention of following through with plan
  o Has the patient or a family member ever attempted suicide
  o Is the patient currently using drugs or alcohol

Please call or text project leader, Mallory Matusik, with any questions at any time: (219) 484-7683
APPENDIX C

Protocol

<table>
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<tr>
<th>TITLE: POSTPARTUM DEPRESSION SCREENING AND FOLLOW UP</th>
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<tr>
<td>AUTHOR: Mallory Matusik, RN, BSN</td>
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<tr>
<td>DATE ORIGINATED: 7/21/2021</td>
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</table>

POLICY STATEMENT/PURPOSE: to incorporate evidence-based practice for screening and follow up of postpartum depression.

INDICATIONS: all women in the postpartum period at 2 or 6-weeks postpartum

EQUIPMENT: EPDS screening tool, paper form

PROCEDURE:
1. Screening
   a. Receptionist gives patient consent form, demographic form, and patient education handout
   b. Receptionist gives participant EPDS paper form to fill out after consent
   c. RN enters results of EPDS into participant chart
   d. Physician/nurse practitioner reviews results of EPDS with the participant
   e. Score of 10 or greater indicates positive screening result
2. Follow up for positive screening but no diagnosis of postpartum depression
   a. Educate participant on symptoms of postpartum depression and suicidal thoughts/risk
      i. Provide project participants with education handout
      ii. Instruct participant to call the provider with symptoms of postpartum depression and/or thoughts of suicide to arrange for emergency referral to psychiatry
      iii. Instruct the participant to call 911 if suicidal and has intentions to carry out suicide plan
b. Schedule follow up visit in 4 weeks for re-screening and assessment
   i. Score of 10 or greater on the EPDS at follow up visit warrants diagnosis and treatment for postpartum depression

3. Diagnosing postpartum depression
   a. Diagnosis made by provider based on clinical judgement, positive screening, symptoms, and risk factors
      i. Refer to DSM-5 criteria in provider education handout for diagnosis

4. Treatment options for positive screening and diagnosis of postpartum depression
   a. Pharmacologic treatment
      i. SSRI
         1. Sertraline 50-200mg daily
            a. Dose initially with 50mg/day and increase in 2-4 weeks if initial dose ineffective. Increase by 25-50mg every week with a max dose of 200mg/day
         2. Escitalopram 10-20mg daily
            a. Dose initially with 10mg/day and increase to 20mg/day after a minimum of 1 week
   b. Alternative therapy
      i. Cognitive behavioral therapy (CBT)
      ii. Exercise
         1. Walking, yoga, light weight training, swimming once bleeding has ceased, and cycling
      iii. Time for self
      iv. Support from peers and family
      v. Provide all participants with education handout with information on alternative therapies
   c. Referral
      i. Referral for CBT
      ii. Referral to mental health care provider after diagnosis

5. Follow up after diagnosis and treatment
   a. Schedule follow up in 2 weeks after initiation of treatment or as directed by the provider

6. Assessment of suicidal and/or homicidal ideation
   a. Positive response on #10 on EPDS by participant
   b. Assess risk of suicide
      i. Suicidal thoughts
      ii. Suicide plan, method, means to carry out plan
   c. Assess participant and infant safety
   d. Assess participant support system
   e. Arrange for emergency psychiatric consult if having suicidal thoughts or at risk
   f. Assess need for activation of emergency services
i. Participant has a suicide plan and has the means and the intention to carry out plan
ii. Transfer to hospital/psychiatric unit

DOCUMENTATION:
1. EPDS score in patient chart
2. Patient reported symptoms of postpartum depression
3. Follow up visit if scheduled
4. Initiation of treatment or referral
5. Detailed encounter note of patient’s postpartum visit
APPENDIX D

EPDS Tool

Edinburgh Postnatal Depression Scale¹ (EPDS)

Name: ___________________________  Address: ___________________________

Your Date of Birth: ___________________________  Phone: ___________________________

Baby’s Date of Birth: ___________________________

As you are pregnant or have recently had a baby, we would like to know how you are feeling. Please check the answer that comes closest to how you have felt IN THE PAST 7 DAYS, not just how you feel today.

Here is an example, already completed.

I have felt happy:
☐ Yes, all the time
☐ Yes, most of the time  This would mean: “I have felt happy most of the time” during the past week.
☐ No, not very often  Please complete the other questions in the same way.
☐ No, not at all

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, I 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

Administered/Reviewed by ___________________________  Date ___________________________


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## APPENDIX E

### GANTT Chart

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### Notes

- The Gantt chart visually represents the project timeline, with tasks assigned specific dates and durations.
- Key tasks such as "Present project to clinical site" and "Provide EBP and project det" are marked with a start date.
- "Provider/staff education" and "Create protocol" follow shortly after.
- "Create provider education ha" and "Create patient education ha" are scheduled for later in the timeline.
- "Project implementation" and "Project outcome" are planned for the end of the project.

This chart helps in managing resources and monitoring progress against the planned schedule.
<table>
<thead>
<tr>
<th>Jan 9</th>
<th>Jan 16</th>
<th>Jan 23</th>
<th>Jan 30</th>
<th>Feb 6</th>
<th>Feb 13</th>
<th>Feb 20</th>
<th>Mar 6</th>
<th>Mar 13</th>
<th>Mar 20</th>
<th>Mar 27</th>
<th>Apr 3</th>
<th>Apr 10</th>
<th>Apr 17</th>
<th>Apr 24</th>
<th>May 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>T</td>
<td>F</td>
<td>S</td>
<td>M</td>
<td>T</td>
<td>W</td>
<td>T</td>
<td>F</td>
<td>S</td>
<td>M</td>
<td>T</td>
<td>W</td>
<td>T</td>
<td>F</td>
<td>S</td>
</tr>
</tbody>
</table>

This is a monthly calendar showing dates from January 9 to May 1.
APPENDIX F
Demographic Form

Patient name:

Age:

Education level

☐ less than high school diploma     ☐ some college
☐ high school                      ☐ college degree

Job status

☐ employed full time               ☐ self employed
☐ employed part time               ☐ not employed

Race/ethnicity

☐ African American                  ☐ White                   ☐ Hispanic
☐ Asian                             ☐ American Indian        ☐ Other:

Marital status

☐ married                           ☐ single                  ☐ divorced                ☐ widowed

Social history

☐ smoker                            ☐ alcohol use             ☐ drug use                ☐ none
☐ history of depression             ☐ family history of mental illness
☐ history of other mental illness (please list):
HAVE YOU COMPLETED YOUR POSTPARTUM DEPRESSION SCREENING?

Ask the front desk or your provider about screening for postpartum depression with the EPDS tool today!

Franciscan HEALTH