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A MASTER'S CAPSTONE PROJECT
SUBMITTED TO THE GRADUATE FACULTY
OF THE GRADUATE SCHOOL
BETHEL UNIVERSITY

BY
LESLIE R. BOYER DWYER

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
MASTER OF SCIENCE IN NURSING

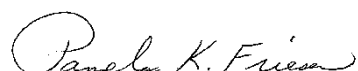
DECEMBER 2017

BETHEL UNIVERSITY
THE EFFECTIVENESS OF PRENATAL EDUCATION IN THE
PREVENTION OF POSTPARTUM DEPRESSION

Leslie R. Boyer Dwyer

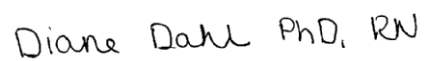
December 2017

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Signature

APPROVED



Dean of Nursing



Director of Educator Program

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I wish to take this opportunity to thank God for giving me the strength and courage to achieve this long-term goal in my life. To complete my Master's Degree in Nursing at Bethel University has been an honor and a blessing. I dedicate this achievement to my family who has been an inspiration while traveling the highest peaks and the most turbulent waters of such a fulfilling journey. You are my greatest joy, and I thank you for your support and understanding.

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Abstract for Critical Review of Literature

Background: With more than 800,000 new mothers in the United States experiencing postpartum depression (PPD) in the first year following delivery, research is warranted to determine if prenatal education is effective in reducing or eliminating PPD altogether.

Purpose: The purpose of this critical review of literature is to examine (PPD) and determine if the concept of prenatal education can effectively prevent or reduce the risk of PPD.

Results: Pender's Health Promotion Model (HPM) was used to assist in analyzing studies for the literature review. Research included twenty individual studies including both qualitative and quantitative methods. The critical review of literature revealed that PPD is a significant issue affecting ten to fifteen percent of women in the United States who experience the condition within the first year after giving birth. In the majority of cases, prenatal education is seen as an important and helpful intervention which can be utilized as an effective nursing measure. Additional research is suggested for most studies.

Conclusions: Postpartum depression prevention education or prenatal education should be addressed as a vital piece of nursing practice in the area of total prenatal care. It is essential that individuals are universally screened for depressive symptoms so nurses can build professional rapport and trusting relationships with patients for women to overcome psychological barriers to receive help and various forms of support. Continued research is recommended.

Implications for Nursing Research and Practice: Further research should be conducted regarding the importance of prenatal and postpartum depression screening for interventions to be initiated during early pregnancy and continued throughout the first year. Another research item for consideration is the efficacy of various PPD interventions such as cognitive based therapy

(CBT), interpersonal psychotherapies (IPT) and various programs as they relate to improved socialization and PPD prevention. Establishing the best practice for pregnant women as it relates to postpartum depression education is paramount in reducing PPD rates and improving positive outcomes regarding mother and infant wellness and bonding.

Keywords: Postpartum depression (PPD), PPD prevention, PPD education

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Chapter I: Introduction

The purpose of this master's project is to discuss a significant nursing issue using a critical review of the literature to address the topic. The concern to be addressed is whether prenatal education reduces or alleviates postpartum depression in women. Educating individuals about postpartum depression, and how to prepare for the role of parenthood, is an important priority for nurses in a variety of settings.

Statement of Purpose

Postpartum depression (PPD) is a growing concern in the United States, affecting an estimated 10-15% of mothers within their first year following delivery (Centers for Disease Control, 2008). While many mothers anticipate the time following birth to be special moments filled with sweet lullabies, endless hours of bonding, and rocking baby to sleep, others find this postpartum period to be anything but special. Difficulty with breastfeeding, concerns about finances, or an unexpected form of delivery can place stress on the new mother and lead to a higher probability of depression. If support systems are not firmly in place, chronic illness is present or prior emotional issues preceding the delivery exist, the risks of depression may be increased. The purpose of this critical review is to examine postpartum depression and to determine if prenatal education can effectively reduce or prevent the risk of postpartum depression.

Evidence of Need for Critical Review

There are approximately four million live births every year in the United States; roughly 800,000 of these mothers will experience major or minor depression within the first three months following delivery (Werner, Miller, Osborne, Kuzava, & Monk, 2015). Postpartum depression is a critical health concern that can set the stage for a series of adverse outcomes for both the

mother and baby. Women can experience irritability, feelings of guilt, anger, and an inability to care for themselves and their infant (Kennedy, Beck, & Driscoll, 2002). Restlessness, lethargy, hopelessness, an inability to laugh, crying uncontrollably, experiencing memory lapses, and undergoing wild swings in appetite are what some have coined, “suffering in silence,” as no one feels safe to disclose these overwhelming symptoms (Kleiman, & Raskin, 2013, p. xii). In addition to the harmful effects of postpartum depression on the mothers, infants and children are not spared from its detrimental consequences. Research findings have consistently shown negative outcomes of PPD relating to children’s emotional and behavioral development (Beck, 2006). According to Gjerdingen and Yawn (2007):

In the first 3 months after childbirth, 14.5% of women have a new episode of major or minor depression, and 10% to 20% of mothers are believed to suffer with depression sometime during their postpartum course, making postpartum depression the most common serious postpartum disorder. (p. 280)

Significance to Nursing

Nurses may influence PPD by reaching out to individuals in the areas of public health; ob-gyn clinics; Women, Infants, and Children (WIC) nutrition clinics; hospitals; and various healthcare facilities. As women, or their friends and family members, may not always detect the signs and symptoms of PPD, it is imperative that education be provided through as many available sites as possible. Education involving prenatal care and PPD prevention intervention may encourage new mothers to take care of themselves first, ultimately “filling their bucket” (Rath & Clifton, 2004, p. 5) in order to take care of others in return.

Theoretical Framework

The critical review of the literature related to PPD will be supported by the Health Promotion Model (HPM), authored by Nola Pender, noted nursing theorist known for her worldwide collaboration on health promotion and her background in development, psychology, and education that utilizes a holistic nursing perspective. In Pender's 1982 representative work, *Health Promotion in Nursing Practice*, the model has applications for emphasizing the importance of assessing factors believed to influence health behavior changes (as cited in Alligood, 2014). The revised HPM model of 2006 describes interactions between the nurse and client while considering the role of the environment in health promotion.

According to Pender (2014), the HPM encourages individuals to express their personal health potential, assess their specific competencies, accept a balance between change and stability, and regulate their own behaviors (as cited in Alligood, 2014). While professionals exert some influence, individuals interact and transform the environment progressively and self-initiate person-environment patterns that are essential to change. Pender's (2006) Model is middle range in scope and is highly generalized to an adult population (as cited in Alligood, 2014). In addition, this framework is easy to understand and is accepting of cultural diversity, a paramount feature of this critical review is a variety of individuals and populations being included in the reviewed studies.

Taking into account behaviors for enhancing health, Pender's (2006) Model applies to individuals across the lifespan (as cited in Alligood, 2014). The HPM not only considers biological factors and personal behaviors, but also accounts for immediate competing demands and preferences, which are behaviors that individuals have little or no control over such as family responsibilities, motherhood, or bringing home a new baby. In this model, health-promoting

behaviors would include modifying factors that would encourage new mothers to obtain adequate rest, get regular exercise, and build positive relationships to establish a strong support system.

Using Pender's (2006) Model, teaching a quality prenatal education program or PPD prevention class could be a central part of an individual's care (as cited in Alligood, 2014). In addition to other resources such as coordinating a home visiting program, reinforcing support from family and friends, and encouraging regular obstetric and gynecological care, making appropriate medical or psychosocial referrals may be an appropriate intervention for someone showing signs and symptoms of PPD (Kozinsky et al., 2012).

Summary

Although seldom discussed, PPD is a relatively common disorder experienced by new mothers. PPD is detrimental to women and their families with far-reaching, ill effects. Nurses educators have the opportunity to assist new mothers through PPD by providing prenatal, antenatal, and postpartum education. PPD prevention that utilizes sound teaching techniques grounded in the theory of Pender's (2006) Health Promotion Model is paramount in assisting new mothers through the stages of pregnancy, labor, delivery, and new parenting. Obtaining appropriate obstetric care, encouraging connection with supportive family and social support, and securing proper physical and psychiatric referrals are all examples of behaviors grounded in Pender's theory (Alligood, 2014; Xie, He, Koszycki, Walker, & Wen, 2009).

Chapter II: Methods

The purpose of this critical review is to synthesize research literature from a 10-year-period, 2007 – 2017, and to answer the following nursing practice question: Does the provision of prenatal education effectively reduce or prevent the risk of postpartum depression in postpartum mothers? The following tools are search strategies and criteria used to assist in locating resources regarding prenatal and postpartum information and education.

Search Strategies

The strategies used in this literature review include an extensive search of the following databases: Cumulative Index to Nursing and Allied Health Literature (CINAHL), PubMed, (EBSCO), (PSYCHOINFO), and (SCOPUS). Database keywords used to acquire information included the following: postpartum depression, prenatal education programs, and postpartum depression prevention education programs. The range of research age was ten years or less.

When searching articles in SCOPUS, postpartum depression (PPD) was the keyword used in the initial query which elicited 5,532 articles, a quantity too large to examine. The next keyword query used was PPD prevention, which reduced the number to 618 articles. The need to further reduce the number of articles employed the keyword education, which brought the final number for this database to 255 research articles.

Criteria for Inclusion/Exclusion

Most of the articles chosen for this literature review were published between the years of 2009 and 2016. Two of the earliest articles were published in 2007 and 2008. Articles were selected on the ability to illustrate the issue of PPD, illuminate the severity of the topic, describe the far-reaching nature of the issue, because of the evidence provided in the research, support past attempts at educational programming and suggestions for the future. Exclusion criteria

covered articles that were older than ten years due to the increasing incidence and seriousness of the issue. Articles that were determined to be of poor quality were not included in this review.

Literature Selected for Review

Articles chosen for this review needed to address PPD, potential causes of PPD, interventions of PPD, symptoms of PPD, and studies regarding PPD education. Research methods used in studies reported in the chosen articles included randomized controlled trials (5), quasi-experimental design studies (4), systematic literature reviews (3), prospective cohort design studies (2), qualitative studies (2), a program evaluation (1), a descriptive mixed-mode study (1), a case study (1), and a non-experimental study (1). The twenty articles were all of good quality with the exception of three, high-quality studies.

Criteria for Evaluating Literature

The following describes the levels for strength of evidence, and quality of evidence based on the Johns Hopkins Method of Research Evidence Appraisal that was used to critique the literature (Dearholdt & Dang, 2012). The strength of the evidence is categorized by levels I-III regarding research. The study is considered Level I if it is a randomized controlled trial (RTC) or meta-analysis. Research is defined as Level II if it is a systematic review of RCTs, a quasi-experimental study or a quasi-experimental study with or without meta-analysis. Level III research is a non-experimental study, a qualitative study or meta-synthesis. Levels IV and V are for evaluated non-research evidence, with Level IV for clinical practice guidelines and Level V for expert opinion, case studies, and literature reviews. The quality of evidence for research is stated as being A (High), B (Good), and C (Low). High-quality studies include consistent, generalizable results, definitive conclusions, and thorough scientific evidence. Good-quality studies consist of sufficient sample sizes, fairly definitive conclusions, and reasonably consistent

results. Low-quality studies include those with little evidence, major flaws, and conclusions, that cannot be drawn from the data provided. The levels of the quality of evidence for non-research are the same as those described above for the strength of evidence (Dearholt, & Dang, 2012).

Summary

This chapter described search strategies used to locate literature, the eligibility criteria for the inclusion and exclusion of articles, and the various types and numbers of articles selected for review. The criteria for literature evaluation was determined by the Johns Hopkins Nursing Evidence-Based Practice Research and Non-Research Evidence Appraisal criteria (Dearholdt, & Dang, 2012).

Chapter III: Literature Review and Analysis

This chapter synthesizes the major findings of prenatal education, how it affected postpartum depression (PPD), PPD interventions, and PPD screening recommendations. The matrix (see Appendix) summarizes research articles by organizing them under the following headings: citation and quality level, purpose of literature, sample, design, measurements, results, and recommendations. The strength and quality of evidence were rated as suggested by the Johns Hopkins Evidence-Based Practice Model and Guidelines (Dearholdt & Dang, 2012).

Synthesis of Major Findings

Reviewed articles indicated that PPD is significantly undertreated and prenatal education may be essential in reducing this negative experience for mothers, not only in the early phases of pregnancy but antenatally and postpartum as well. Interpersonal psychotherapy (IPT) and cognitive behavioral therapy (CBT) were the two main types of education mentioned throughout the review regarding prenatal PPD prevention education (Werner et al., 2015). In addition to the initial major finding of what PPD prevention programming looks like, it is also significant that nurses were encouraged to implement PPD screening and education throughout the care of pregnant or postpartum women (Gjerdingen & Yawn, 2007). According to the CDC (2008), up to 15% of mothers can experience PPD within the first year after giving birth. PPD is associated with irritability, anxiety, anger, and feelings of guilt, and if left untreated, can hinder effective parenting skills and mother-infant bonding (Abbasi, Chuang, Dagher, Zhu, & Kjerulff, 2013). Finally, the last major finding is that limited support is a risk factor in the development of PPD (Xie et al., 2009).

Need for education. Although motherhood is generally regarded as a positive experience, it can be a time of physical, psychological, and social adaptation that can leave

women in a state of vulnerability. PPD is quite common in that it affects 13-19% of women during the first year following childbirth, and while limited to that year, PPD can last for a full year or longer with implications for women and their families. In a qualitative, descriptive study, Habel, Feely, Hayton, Bell, & Zelkowitz, (2015) found that women suffering from PPD are likely to experience subsequent episodes of depression. In their systematic review of literature, Gjerdingen and Yawn (2007) stated that the PPD screening rate in primary care clinics was approximately 50% by optimistic standards and up to 50% of women were not diagnosed with PPD because the symptoms were often difficult to recognize due to simulation of other psychological changes.

Jesse et al. (2010) explained that low-income and rural women have a high prevalence of antepartum depression. These women have fewer financial options and typically demonstrate limited insurance coverage more so than upper-income women. Ho et al. (2009) found that new mothers in a Taiwanese study were often uncomfortable talking about their postpartum depression symptoms due to feelings of shame or stigma.

In their mixed-mode study, Drake, Howard, and Kinsey (2014) noted that it is not uncommon for some women to underreport feelings of depression for fear that their baby could be removed from their care. Social appropriateness or acceptable response bias can be an issue when asking sensitive questions about depression. Alternative strategies could be on-line screening or person to person counseling in a staged process, which could be educationally helpful. These interventions could break down privacy barriers and ultimately encourage fathers and other family members to take part in screening. Close friends and family members may benefit from the screening as well; they may be in the best position to recognize symptoms of depression in themselves or their loved ones.

Cognitive behavioral therapy (CBT). According to Ammerman et al. (2013), CBT is one of the most widely utilized evidenced-based treatments for PPD. Cognitive Behavioral Therapy (CBT) is a therapy that works well with home visits as it teaches mothers about strategies and procedures that promote engagement, facilitates delivery in the home, collaborates relationship between nurse and mother, and addresses unique social issues for those who are isolated. Regardless of the site, the randomized controlled study by Ammerman et al. (2013) found that CBT was found to be an acceptable and clinically beneficial program for pregnant women with histories of depression.

Dimidjian et al. (2016), in a randomized controlled study, suggested that mindfulness-based cognitive therapy for the prevention of depression (MBCT-PD) was also a viable nonpharmacological approach to preventing depression or the relapse of depressive symptoms among pregnant women. MBCT-PD is based on the theory that people with backgrounds of depression can be vulnerable during challenging times due to associations of emotion and cognition during earlier depressive episodes; these automatic reactions increase the risk for depressive situations.

Mindfulness practices are taught to demonstrate awareness and provide alternative modes of relating to an experience that is focused and accepting. Dimidjian et al. (2016) stated, “Teaching the skills and practices of mindfulness meditation and cognitive behavioral therapy during pregnancy may help reduce the risk of depression during an important transition in many women’s lives” (p. 134). Despite the positive benefits noted earlier, Austin et al. (2008) found that not all women are interested in attending such courses prior to delivery. With group MBCT-PD programs being offered in addition to antepartum childbirth delivery classes, limited childcare, pregnancy fatigue, and lack of motivation following long days at work, the course can

be an extra commitment and not an optimal preventive strategy. Austin et al. (2008) stated, “Targeting at-risk women for a brief antenatal intervention and then longer group or individual program in the postnatal period, when they are more likely to be experiencing distress, may well be much more effective” (p. 43).

Interpersonal psychotherapy. (IPT) Psychotherapies have been utilized in monotherapy and in combined treatment with the rationale of providing care for PPD devoid of side effects. Interpersonal psychotherapy is a time-limited dynamic psychotherapy that emphasizes the interpersonal environment of the depressive situation. Interpersonal psychotherapy has been modified for other disorders as well. However, it is mainly used for interpersonal relationships and social functioning issues Miniati et al. (2014). According to Gao, Chan, Li, Chen, and Hao (2010), women’s relationships with family members are significantly related to PPD. Because the mother goes through such a considerable role transition during the prenatal period, particularly with primiparous women, the IPT approach may be a well-matched method to assist during this difficult time. Gao et al. (2010) stated,

IPT could help new mothers in three areas, role transitions, interpersonal disputes, and interpersonal deficits. Role transitions are situations in which the clients have to adapt to a change in life circumstances. IPT aims to help the client with the role transition to re-appraise the old and new role, to identify the source of difficulty in the new role and fashion solutions for these roles. Interpersonal disputes tend to occur in marital, family, family, or social settings. Clients may have diverging expectations of a situation and that this conflict is excessive enough to lead to significant stress. IPT aims to identify sources of dispute, faulty communication or unreasonable expectations. It intervenes by communication

training, problem-solving or other techniques that aim to facilitate change in the situation. Interpersonal deficits refer to as situation when clients report impoverished relationships in terms of both number and quality of relationships. IPT aims to identify problematic processes such as dependency or hostility and aims to modify these processes (p. 1209).

According to Werner et al. (2015), IPT was originally developed as a treatment for depressive disorders within the general population. Recent results, as suggested by Gao et al. (2010), however, mentioned that not only are IPT interventions simple and easy to deliver, but they have the potential to reduce the development of PPD, and therefore IPT interventions could have widespread application by reducing associated healthcare costs and social burdens.

Need for universal screening. According to Abassi et al. (2013), there are no current evidence-based guidelines for universal postpartum screening; therefore, practitioners are often uncertain about who should be screened for PPD. This is a concern as PPD can lead to complications for both the mother and child. A study by Farr, Denk, Dahms, & Dietz (2014) found that it is possible some clinicians provide depression educational materials to all women but only discuss high-risk information to those who screen positive. However, discussing the signs and symptoms of depression before they intensify, may help women identify their symptoms and seek care before symptoms become severe. It is critical that nurses understand and teach about the risk factors, signs and symptoms, prevention, use, and interpretation of PPD screening tools. According to Neiman et al. (2010), “Early identification, screening, prevention, and treatment of PPD are crucial for improving overall outcomes for the mother and baby, as well as for decreasing mortality and morbidity” (p. 217). Through a systematic review of the literature, Gjerdingen and Yawn (2007) found that the Edinburgh Postpartum Depression Scale

(EPDS) was the best screening tool for identifying women at risk for PPD; ideally, it should be used for mass screening.

Sockol, Epperson, and Barber (2013) noted that pregnancy is a time of increased healthcare utilization, which provides opportunities for screening and intervention. Some demographic groups have been identified as high risk for postpartum depression, such as minority women and women of low socioeconomic status. Evidence gathered through structured critical interviews indicated that preventive interventions may be more difficult for depression, especially among women of various ethnic backgrounds, according to Wisner et al. (2013). Sockel et al. (2013) found that women with limited financial resources might have better access to healthcare during their pregnancy than during other times in their lives. Pregnancy is a period where healthcare utilization provides increased opportunities for screening and intervention.

Farr et al. (2014) added the following venues to the list of sites for potential screening encounters: obstetric visits, pediatric appointments, WIC visits, neonatal intensive unit (NICU) encounters, and meetings at mental health clinics or with social services. Another concept suggested by Drake, Howard, and Kinsey (2014) was the idea of computerized information. The authors recommended that providing information and screening for pregnant and postpartum women via the internet could offer significant promise as a creative solution to address PPD.

Need for social support. In a prospective cohort study, Xie et al. (2009) determined that lack of social support was a significant risk factor in the development of PPD. Conversely, strong social ties served as buffers against depression in the postpartum period. In a quasi-experimental study, Letourneau et al. (2015) found telephone-based peer support intervention was effective for both early postpartum depression and maternal depression. Letourneau et al. (2015) also reported that perceived support improved depression symptoms significantly while

actual increased support was related to a marked decrease in depressive symptoms. In the Xie et al. (2009) study, three dimensions of social support were observed; objective, subjective, and support availability. Kozinsky et al. (2012) determined that with repeated discussion about PPD, such as in various prenatal education programming, major benefits included how to utilize support from others, how to prepare for the appearance of PPD symptoms, and how to improve coping strategies. Kozinsky et al. (2012) wrote, “The group effect may particularly facilitate the reporting of symptoms and gathering support from the partner/family and decreasing social isolation” (p. 105). Xie et al. (2009) found that prenatal care programs involving social support interventions and those delivered in the immediate postnatal period may be the most cost-effective means to prevent PPD.

Strengths and Weaknesses of the Studies

The studies with the highest level of evidence in this literature review were level I and level II research, according to the Johns Hopkins Nursing Evidence Appraisal. These studies are particularly strong because they test an intervention and provide a control group and randomization of subjects (Dearholt & Dang, 2012). This review included articles that collected data over 10 years from a variety of works from level I and II categories: Ammerman et al (2013); Austin et al. (2008); Dimidjian et al. (2016); Farr et al. (2014); Gao et al. (2010); Gjerdingen and Yawn (2007); Kozinsky et al. (2012); Letourneau et al. (2015); Miniati et al. (2014); Neiman et al. (2010); Ngai et al. (2009); Sockol et al. (2013); Top and Karacam (2016). In general, the quality of the article samples was very good.

The critical review of literature included 20 journal articles. Research articles focused on the universal concept of postpartum depression and screening, the model of cognitive behavioral therapies (CBT), interpersonal psychotherapies (IPT), and articles regarding the importance of

support as it related to the prenatal and postpartum period. There were several limitations within studies in this review. One limitation was the use of the Edinburgh Postnatal Depression Scale (EPDS), a self-reporting instrument. This instrument is a legitimate tool measuring those at risk of developing depression. Although the EPDS is an assessment tool, it does not diagnose individuals with clinical depression (Neiman et al., 2010). (Neiman et al., 2010) This tool was used by Farr et al. (2014); Neiman et al. (2010); Ho et al. (2009); Top and Karacam (2015) and Wisner et al. (2013).

The next recognized limitation was the relatively smaller sample size of five studies including Letourneau et al. (2014); Miniati et al. (2014); Drake et al. (2014); Gjerdingen and Yawn (2007); and Werner et al. (2015). The smaller size of the study sample may not have been representative of the population such as in the Letourneau et al. (2014) study that could have prevented the analysis of risk factors such as low income and living in a rural location. Letourneau et al. (2014) goes on to explain how a larger sample size is more representative of trends in the population.

The third recognized limitation was the potential uncertainty of the ideal representation of the population for each study group regarding individual research purposes. For example, one group of study participants was selected through recruiting in a strictly urban setting which could have influenced perceptions of depression, as studies have found differences between city and rural populations (Habel et al., 2015). Studies that had concerns related to sample representation included, Gao et al. (2010); Habel et al. (2015); Jesse et al. (2010); Kozinski et al. (2012); and Xie et al. (2009).

The fourth limitation identified in several studies was the need to lengthen the study or extend research follow up to include additional data. An example of this limitation would include

the Kozinsky et al. (2012) research article. This research example suggested that a longer follow up period (from 3 months to up to one year) could check whether improvement was established or maintained following the intervention. The research studies within this limitation included Abassi et al. (2013); Ammerman et al. (2013); Austin et al. (2013); Dimidjian et al. (2016); Ngai, Chan, and Ip (2009), and Sockol et al. (2013). This lengthened research would offer additional credibility to determine how effective the education or intervention was over the long term (Dearholt & Dang, 2012).

Summary

This chapter has provided a synthesis of the most noteworthy findings of research included in the critical review. The findings centered around the need for education which included the two main types of instruction noted most often throughout literature: Interpersonal Psychotherapy (IPT) and Cognitive Behavioral Therapy (CBT). The next area of study results was the importance of universal screening for PPD and finally, how social support for the mother and often other family members can be of assistance in reducing not only PPD, but depression in general. Strengths and limitations in the research literature were also discussed.

Chapter Four: Discussion, Implications, and Conclusions

This chapter synthesizes the current trends and gaps of the reviewed literature. It presents the implications for nursing practice and education in addition to providing recommendations for future nursing research. The chapter concludes with an analysis of how Pender's (2006) Health Promotion Model (HPM) has guided the review of literature and provided a basis for nursing practice suggestions.

Discussion of Literature Review

The reviewed literature helped solidify a response to the question: Does the provision of prenatal or antenatal education effectively reduce or prevent the risk of postpartum depression in postpartum mothers? It was found that individuals, for the most part, benefitted from prenatal, antenatal, and postpartum education in the form of cognitive behavioral therapy (CBT) and interpersonal psychotherapy (IPT). A brief IPT group intervention was completed with results indicating a 20% development rate of PPD within the control group. At the same time, the intervention group indicated only a 4% PPD rate within the same 3-month period. Kozinsky et al. (2012) completed a similar study to support the finding that preventative interventions based on IPT principles seem to be an effective form of PPD prevention (Miniati et al., 2014).

Regarding the mindfulness-based cognitive therapy (MBCT), in a study by Dimidjian et al. (2016), a significant 50.2% of women who received treatment as usual (TAU) reported PPD at 6 months postpartum compared to the 18.4% PPD rate of those receiving an MBCT intervention. This research was completed for those who had previously experienced depression therefore, it was a relapse prevention effort (Dimidjian et al., 2016).

In addition to the previously listed forms of education, Kozinsky et al. (2010) suggest that focusing on forms of psychotherapy, stress management, improving coping mechanisms, and the development of support systems also has been shown to be an effective means in reducing postpartum depression. It was also deemed important to address the learning needs of the patient population throughout all stages of pregnancy as depression could begin in the early days of gestation through the first year following delivery.

Xie et al. (2009) found that mothers can easily benefit from various forms of support. The term support may be utilized in the way of family and friends, telephone follow-up, group counseling or home-visiting programs. Support can be broken into three areas: subjective, objective, and support availability. Subjective support reflects an individual's feeling of being respected or understood. Objective support reflects an individual's feeling of being practically supported within a social network, and support availability is the individual's feeling of being available and effective in dealing with a life event such as childbirth.

Another finding is the importance of (PPD) screening. Although the current screening rate is less than 50%, it is suggested that roughly 80% of mothers are willing to be screened for (PPD) (Neiman et al., 2010). Early identification, screening, prevention and the management of PPD are fundamental for improving outcomes for the mother and baby dyad. Mass screening for PPD using validated screening tools improves the rates of detection and care of PPD and should be used in primary care institutions and obstetricians' offices. The Edinburgh Postnatal Depression Scale (EPDS) has been identified as the best clinical tool for screening PPD (Neiman et al., 2010).

Gaps and Trends in Literature

There has been very little data on biological interventions such as psychotropic medications, reproductive hormones or micronutrients. However, there have been numerous studies regarding the psychological and psychosocial preventive interventions for PPD. Not surprisingly, these studies are difficult to compare as they vary widely in terms of personnel involved, treatments, duration of treatment (taking place during the pregnancy or postpartum period), screening, outcome measures, and follow-up times (Werner et al., 2015). This writer found that locating PPD prevention research was somewhat difficult in that studies were very specific to groups such as a certain culture of women within a small hospital in a particular city. Therefore, a gap exists in large-scale, broad, PPD education prevention research. Gaps also exist in biological interventions as noted earlier and there appears to be room for study regarding additional education methods and treatments.

There is a trend in utilizing the Edinburgh Postnatal Depression Scale (EPDS) for screening purposes as it has been deemed the most reliable form of screening available. Unfortunately, it remains unclear exactly how often the screening should take place (Drake, Howard, & Kinsey, 2014). A trend is also noted in utilizing increasing amounts of technology for screening and educational purposes. This high-tech current is important for nurse educators to be aware of and utilize especially when teaching the next generation of nurses (Letourneau et al., 2015; Drake, Howard, & Kinsey, 2014).

Implications for Nursing

In reviewing the literature from evaluations, exploratory studies, and perinatal recommendations as it relates to postpartum depression, nursing implications include providing cognitive behavioral therapy (CBT) (Dimidjian et al., 2016), interpersonal psychotherapies (IPT)

(Miniati et al., 2014), various forms of support (Xie et al., 2009), and understanding the escalating demands of universal PPD screening (Drake, Howard, & Kinsey, 2014). Nurses and nursing programs must be increasingly aware of the issue of PPD as depressive issues alone are estimated to cost the United States between \$30 billion and \$50 billion in lost productivity and medical expenditures every year. It is projected that by the year 2020, depressive illnesses will be the second leading cause of disability throughout the world (Gjerdingen & Yawn, 2007).

Nurses can be active on the frontlines of PPD prevention by means of education, awareness, and screening. Research indicated that the use of structured educational methods may reduce PPD scores and lower the numbers of new mothers having depression (Top & Karacam, 2016). In addition, nurses should encourage the development of social support and refer mothers to professional care if needed, initiate guidance, and offer reassurance that the new mother is capable and able to overcome the depressive situation (Letourneau et al., 2015).

Regarding PPD screening, according to Ko et al. (2017), nurses and other practitioners should be following the guidelines,

The American College of Obstetricians and Gynecologists (ACOG), the American Academy of Pediatrics (AAP), and the U.S. Preventive Services Task Force recommends that providers screen for depressive symptoms at least once during pregnancy or postpartum, using a validated screening tool. In addition, the AAP recognizes that depression screening is part of family-centered well-child care, given pediatricians' early access to the mother-infant duo (para. 9).

Recommendations for Nursing Research

Continued research is recommended for areas of study regarding PPD education, PPD prevention methods, and PPD screening. Further study is indicated regarding IPT with respect to

increasingly diverse groups of people such as teenagers, those with multiparous pregnancies or complications, and mothers with high risk for depression or with a diagnosis of depression. It is suggested that research with high-risk mother's therapy would provide further verification on the outcomes of interpersonal-psychotherapy-oriented antenatal education programmes Gao et al. (2010). Regarding research on the use of cognitive behavioral therapy, nurses would do well to establish the long-term impact of in-home cognitive behavioral therapy (IH-CBT) for longer periods of time in addition to targeting women at risk (such as those with a history of postnatal depression or anxiety) for antenatal interventions (Austin et al., 2008).

In regard to support, additional research is warranted to determine the efficacy, cost-effectiveness, and value of various types of support interventions (Xie et al., 2009). Additional research should be considered for recurrence and relapse as some outcomes suggested that mothers would have benefitted from assistance two years postpartum and beyond. Letourneau et al. (2015) state:

The findings underscore the important role of nurses in the assessment of maternal depression, psychosocial wellness, and social support. Nurses in acute care and community settings should assess PPD, refer mothers to professional care, and encourage development of social support programmes. (p. 1596)

As Neiman et al. (2010) found, though early identification and screening are crucial for detecting and improving the overall outcomes of the mother and infant when dealing with PPD, it is questioned whether the increase in screening efforts would improve clinical outcomes. Gjerdingen and Yawn (2007) suggest, that despite screenings performed at various clinical or community sites, PPD diagnosis rates could probably be improved. However, clinical outcomes may not be impacted unless systems were in place to ensure proper treatment and follow-up care.

An interesting idea that warrants some consideration may be the increased development of the mother-child dyad. By improving the parental attachment or helping to facilitate maternal bonding, there may be the potential to reduce the incidence of PPD in women at risk and improve postpartum and child development outcomes (Werner et al., 2015).

Integration and Application of Selected Theoretical Framework

One of the major theoretical assumptions of Nola Pender's Health Promotion Model (HPM) is that "Persons value growth in directions viewed as positive and attempt to achieve a personally acceptable balance between change and stability" (Alligood, 2014, p. 402). As new mothers are faced with the monumental task of change, engagement in health-promoting behaviors for themselves and their infants, competing demands of which they have very little control, and their own issues of perceived competence and self-efficacy, a commitment to a plan of action and important sources of support can increase a commitment to health-promoting behaviors (Alligood, 2014). This assumption supports the education (by utilizing CBT and IPT methods) and reinforcement that nurses can provide to promote positive health behaviors.

Another theoretical assumption of Pender's HPM is, "Individuals seek to actively regulate their own behavior" (Alligood, 2014, p. 402). Nurses can assist in providing appropriate, supportive resources and encourage proper personal health care. This assumption lends itself to the support issue that is reinforced throughout the literature. To reiterate Letourneau et al. (2015), nurses are encouraged to assess and refer mothers to professional care in all settings. It is paramount to assist in screening, promote appropriate resources, and foster the development of social support programs. When mothers are supported and positively reinforced, they are more likely to be self-confident and feel able to commit to the healthy behaviors set before them.

Summary

Though postpartum depression (PPD) is considered one of the most important and undertreated health issues arising after giving birth (Gerdingen & Yawn, 2007), it is an issue that can be addressed by the nursing community. Through excellent teaching skills utilizing the recommendations such as interpersonal therapy (IPT), and cognitive behavioral therapy (CBT), PPD may be decreased for the childbearing mother (Dimidjian et al., 2016; Werner et al., 2015). Other approaches such as reinforcing various support systems and applying reliable forms of PPD screening, as in the Edinburgh Postnatal Depression Scale (EPDS), can be very helpful (Letourneau et al., 2015; Gjerdingen & Yawn, 2007).

The Health Promotion Model (HPM) utilized by Pender (2006) was used as a benchmark theory in leading this writer through research to answer the initial review inquiry, “Does the provision of prenatal education effectively reduce or prevent the risk of postpartum depression in postpartum mothers?” While studying Pender’s HPM (2006), it becomes clear that providing prenatal education, various forms of support, and PPD screening can provide the type of reinforcement childbearing women need to avoid or reduce the grips of postpartum depression.

In Pender’s HPM (2006), the major assumptions were utilized that discuss individuals’ regulating personal behavior, valuing growth, and achieving a balance between change and stability (Alligood, 2014). With these concepts in mind, the HPM corresponds well with the idea of teaching the reviewed approaches, which demonstrate promise for assisting in accomplishing these health promotion ideals.

Nurse educators are in the unique and honorable position to teach with love, compassion and dignity. Nurses are witness to some of the most intimate, fearsome, yet sacred moments in a women’s life during the childbearing years. To be present at these times of crisis, angst,

excitement, and joy and to act as the hands and feet of Christ, assisting in bringing about positive health outcomes and optimal well-being is a privilege and a true calling.

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Citation, Evidence Level and Quality	Purpose of Study	Sample and Setting	Design		Results	Authors' Recommendations
			Methodology	Instruments		
<p>Abbasi, S., Chuang, C.H., Dagher, R., Junjia, Z., & Kjerulff, K. (2013). Unintended pregnancy and postpartum depression among first-time mothers. <i>Journal of Women's Health</i>, 22(5), 412-416. doi:10.1089/jwh.2012.3926</p> <p>Level: III Quality: Good</p>	<p>To investigate whether pregnancy intention is associated with postpartum depression (PPD). Authors suggest that women with unintended pregnancies have a greater risk for postpartum depression.</p>	<p>Enrollees were nulliparous, between 18 and 35 years of age, English or Spanish speaking, recruited from hospitals, clinics and OB clinics and were residents of Pennsylvania. (n= 2,972)</p>	<p>Prospective cohort study</p>	<p>Pregnancy Risk Assessment Monitoring System (PRAMS) Edinburgh Postnatal Depression Scale (EPDS) Analyses were performed using SAS version 9.3</p>	<p>Of the 2,972 women studied, 952 were first time mothers. Thirty-two percent of these women stated that the pregnancy was unintended and 151 of these women met the criteria for PPD. The prevalence of PPD was greater for those with an unintended pregnancy than those with intended pregnancies.</p>	<p>PPD can lead to far reaching complications for both mother and child. Presently, there are no evidence based guidelines for universal PPD screening which leaves health care providers uncertain about who should be screened. Further research should include more diverse samples of women in terms of pregnancy complications and preterm births.</p>

Citation, Evidence Level and Quality	Purpose of Study	Sample and Setting	Design		Results	Authors' Recommendations
			Methodology	Instruments		
<p>Ammerman, T., Putnam, F., Altaye, M., Stevens, J., A. R. Teeters, & Van Ginkel, J. B. (2013). A clinical trial of in-home CBT for depressed mothers in home visitation. <i>Behavior Therapy</i>, 44(3), 359-372. doi: 10.1016/j.beth.2013.01.002</p> <p>Level: I</p> <p>Quality: Good</p>	<p>To examine the efficacy of an in home cognitive behavior therapy (IH-CBT) program for depressed mothers using a randomized clinical trial.</p> <p>Participants were enrolled in two models of an in-home visitation program entitled <i>Every Child Succeeds</i>. One was an IH-CBT and the other was a Standard Home Visit (SHV).</p>	<p>Ninety-three new mothers in an in-home visiting program were studied. Individuals taking part in the program were 16-37 years of age. Participants were predominantly Caucasian - 62.4%, African American- 32.2%, unmarried- 87.1%. Participants lived in the Ohio and Kentucky areas.</p>	<p>Randomized control study</p>	<p>Beck Depression Inventory (BDI-II), Global Assessment of Functioning Scale (GAF), Outside Treatment Tracking Form (OTTF), Edinburgh Postnatal Depression Scale (EPDS), Hamilton Depression Rating Scale (HDRS), Structural Clinical Interview (SCID-I)</p>	<p>70.7% of those receiving an IH-CBT and 30.2 % of SHV mothers were no longer depressed at post treatment assessment time.</p> <p>IH-CBT provides a first-rate option for new mothers enrolled in home visiting.</p>	<p>IH-CBT provides a viable option for new mothers enrolled in home visitation. This therapy lends itself to other home visitation programs in its potential to reach others with depression who might otherwise face obstacles to care.</p>

Citation, Evidence Level and Quality	Purpose of Study	Sample and Setting	Design		Results	Authors' Recommendations
			Methodology	Instruments		
<p>Austin, M. P., Frillings, M., Lumley, J., Hadzi-Pavlovic, D., Roncolato, W., Acland, S, Saint, K., Segal, N., & Parker, G. (2008). Brief antenatal cognitive behavior therapy group intervention for the prevention of postnatal depression and anxiety: A randomized controlled trial, <i>Journal of Affective Disorders, 105</i>, 35-44. doi: 10.1016/j.jad.2007.04.001 Level: I Quality: Good</p>	<p>The purpose of this study was to evaluate whether a small antenatal cognitive behavioral therapy (CBT) group treatment program and booklet, compared to information provided by a booklet alone would result in less depression and anxiety for women in the postnatal period.</p>	<p>Of 774 women approached, 277 accepted. 191 women were randomized to the CBT intervention and 86 to the control condition. Eventually, 89 women were left to complete the CBT groups and 43 in the control group.</p>	<p>Randomized controlled trial</p>	<p>Antenatal Risk Questionnaire (ANRQ) Edinburg Postnatal Depression Scale (EPDS), Mini International Neuropsychiatric Interview (MINI), Spielberger State-Trait Anxiety Inventory (STAI)</p>	<p>There was a significant improvement in depressive and anxious symptomology for all women however, the CBT intervention was not determined to be superior to the control.</p>	<p>Although a modest reduction in depression was seen in study completers cognitive behavioral therapy group intervention control was beneficial. Further study in this study is strongly recommended.</p>

Citation, Evidence Level and Quality	Purpose of Study	Sample and Setting	Design		Results	Authors' Recommendations
			Methodology	Instruments		
<p>Dimidjian, S., Goodman, S. H., Felder, J. N., Gallop, R., Brown, A. P., & Beck, A. (2016). Staying well during pregnancy and the postpartum: A pilot randomized trial of mindfulness-based cognitive therapy for the prevention of depressive relapse/recurrence <i>Journal of Consulting and Clinical Psychology, 84</i>(2), 134-145. doi:10.1037/ccp0000068 Level: I Quality: Good</p>	<p>To evaluate treatment acceptability and efficacy of mindfulness-based cognitive therapy for the prevention of depressive relapse or recurrence.</p>	<p>A two site, randomized clinical trial was held with women at risk of depressive relapse at the Kaiser Permanente (KP) sites in Colorado and Georgia. Women were at least 32 weeks of gestation and 18 years of age or older. Women with psychiatric disorders or high-risk pregnancies were excluded.</p> <p>(n=86)</p>	<p>Randomized, controlled trial</p>	<p>Edinburgh Postpartum Depression Scale (EPDS), DSM-IV-TR for Axis Disorders, Structured Clinical Interview DSM-IV Axis II for Personality Disorders, Client Satisfaction Questionnaire, Longitudinal Interval Follow-Up Evaluation, Mindfulness based cognitive therapy (MBCT) Adherence Scale</p>	<p>The role of self-compassion is key in the work of MBCT-PD given it is the main focus of the process of MBCT. Self-critical attitudes about motherhood are associated with perinatal depression and anxiety. The percentage of relapse among women who received MBCT-PD was 30% lower than those who received tasks as usual (TAU).</p>	<p>Delivery methods that minimize time burden and inconvenience for most women will be very important to research. Options to consider may be phone based delivery, MBCT-PD, and web-based delivery.</p> <p>The nurse must consider examining the domain of vulnerability and social support which are relevant during the perinatal period – roles not widely studied presently.</p>

Citation, and Level Quality	Purpose of Study	Sample and Setting	Design		Results	Authors' Recommendations
			Methodology	Instruments		
<p>Drake, E., Howard, E., & Kinsey, E. (2014). Online screening and referral for postpartum depression: An exploratory study. <i>Community Mental Health Journal, 50</i>, 305-311. doi:10.1007/s10597-012-9573-3</p> <p>Level: III Quality: Good</p>	<p>To test the efficacy of on-line assessment of postpartum depression (PPD) and identify women's responses to online self-screening. The long-term goal was to test the usefulness of online screening.</p>	<p>Mothers who were over the age of 18, proficient in English, and just delivered a healthy infant were studied. All completed a demographic questionnaire on a laptop computer in the hospital. The study was conducted in the southern United States. Screening was completed in three phases within first 2-3 months.</p>	<p>Descriptive mixed-mode study design</p>	<p>Edinburgh Postnatal Depression Scale (EPDS). Likert scale, Statistical program SPSS, version 19.0</p>	<p>Qualitative data found that mothers may be reluctant to admit depressive symptoms for fear that baby could be removed. Also, partners and family members may be included in the screening as they can recognize symptoms for themselves and their partner.</p>	<p>Online screening for PPD appeared to be feasible and acceptable for most participants. Taking a family centered approach may help improve the process.</p> <p>Emerging research suggests that fathers can also suffer from depression after delivery; they may also be in the best position to recognize symptoms for themselves or in their partner.</p>

Citation, Evidence Level and Quality	Purpose of Study	Sample and Setting	Design		Results	Authors' Recommendations
			Methodology	Instruments		
<p>Farr, S. L., Denk, C. E., Dahms, E. W., & Dietz, P. M. (2014). Evaluating universal education and screening for postpartum depression using population-based data. <i>Journal of Women's Health, 23</i>(3), 657-663. doi: 10.1089/jwh.2013.4586</p> <p>Level: V Quality: Good</p>	<p>To evaluate the availability of prenatal education and screening at delivery, estimate the frequency of postpartum depressive symptoms, and identify venues where additional screening and education could take place.</p>	<p>Women who delivered live infants in New Jersey in 2009 and 2010. The women's information provided EPDS data which was linked to a PRAMS survey. After compiling assessments and screening out missing elements, the final n=2,012. This number represented 145,595 New Jersey women.</p>	<p>Program evaluation</p>	<p>Edinburgh Postnatal Depression Scale (EPDS) Pregnancy Risk Assessment Monitoring System (PRAMS)</p>	<p>Two-thirds of women in this study reported receiving prenatal education regarding signs and symptoms of depression during prenatal care. Women who received teaching at the time of delivery was 89.9%.</p> <p>A substantial percentage of women experienced symptoms after delivery, indicating a need for additional education.</p>	<p>Prospective venues for additional education and screening regarding postpartum education include Women, Infant and Children (WIC) clinics, Neonatal Intensive Care Units (NICU) encounters, and well-baby visits.</p>

Citation, Evidence Level and Quality	Purpose of Study	Sample and Setting	Design		Results	Authors' Recommendations
			Methodology	Instruments		
<p>Gao, L., Chan, S. W., Li, X., Wai-chi Chen, S., & Hao, Y. (2010) Evaluation of an interpersonal psychotherapy-oriented childbirth education programme for Chinese first-time childbearing women: A randomized controlled trial. <i>International Journal of Nursing Studies</i>, 47, 1208-1216. doi:10.1016/j.ijnursetu.2010.03.002 Level: I Quality: High</p>	<p>To determine the effects of an interpersonal psycho-therapy program for Chinese women. This study regards first time, childbearing women at 6 weeks postpartum exploring depressive symptoms, their wellbeing, and their interpersonal relationships.</p>	<p>Conducted in a maternity ward of a regional hospital in China. The women had normal pregnancies, were married, and demonstrated a gestational age of > 28 weeks. Women with psychiatric histories were excluded. n=96 randomly assigned intervention group; n=98 control group.</p>	<p>Randomized, controlled trial</p>	<p>Edinburgh Postnatal Depression Scale (EPDS), General Health Questionnaire (GHQ), Satisfaction with Interpersonal Relationship Scale (SWIRS)</p>	<p>Those receiving the psycho-education program had significantly better results. They experienced psychological well-being, fewer depressive symptoms, and better interpersonal relationships, all at the 6-week period. This is compared with those who received only routine childbirth education.</p>	<p>This program could be implemented as standard childbirth education however the groups would be more effective in a more diverse presentation. This might include courses for mothers with mental health issues, those with high risk pregnancies, multiparous pregnancies and complications.</p>

Citation, Evidence Level and Quality	Purpose of Study	Sample and Setting	Design		Results	Authors' Recommendations
			Methodology	Instruments		
Gjerdingen, D. K., & Yawn, B. P. (2007). Postpartum Depression screening: Importance, methods, barriers, and recommendations for practice. <i>Journal of the American Board of Family Medicine, 20</i> (3), 280 – 288. doi: 10.3122/jabfm.2007.03.060171 Level: II Quality: Good	To examine the potential benefit of group screening for improving postpartum depression (PPD) recognition and outcomes	A review of literature was conducted searching the Cochrane database and MEDLINE looking at articles using the terms depression, PPD, mass screening, and preventive health services.	Systematic review of literature	Beck Depression Inventory (BDI), Bromley Postnatal Depression Scale (BPDS), Center for Epidemiologic Studies Depression Scale (CES-D), Clinical Interview Schedule (CIS), Diagnostic Interview Schedule (DIS), (EPDS), General Health Questionnaire (GHQ), Inventory of Depressive Symptomology (IDS), Zung Self Rating Depression Scale (Zung SDS)	Screening for PPD can be completed at postpartum or well-child check-ups. Although effective treatment is available, fewer than half of PPD cases are recognized. 10-20% of mothers are believed to struggle with depression sometime during their postpartum period.	Adult patients should routinely be assessed for depression. Improvement in clinical outcomes requires enhanced care that includes adequate treatment and follow-up. For screening to impact clinical outcomes, it needs to be combined with systems based depression care.

Citation, Evidence Level and Quality	Purpose of Study	Sample and Setting	Design		Results	Authors' Recommendations
			Methodology	Instruments		
<p>Habel, C., Feely, N., Hayton, B., Bell, L., & Zelkowitz. (2015). Causes of women's postpartum depression symptoms: Men's and women's perceptions. <i>Midwifery, 31</i>, 728-734.</p> <p>Level: III Quality: Good</p>	<p>To explore the differences or similarities in men's and women's perceptions of postpartum depression.</p> <p>To describe how men and women perceive the cause of postpartum depression differently.</p>	<p>Both members of 30 heterosexual couples were studied. Women must have scored at least 12 on the Edinburgh Postnatal Depression Scale (EPDS). The study took place in two hospitals in Quebec, Canada. In-home interviews took place with semi-structured questions such as, "What does your partner think about your symptoms?"</p>	<p>Qualitative descriptive study</p>	<p>Edinburgh Postnatal Depression Scale (EPDS), peer debriefing audit train, and several quotes from various participants were included in study</p>	<p>Nine causes were determined to have direct impact on the development of women's postpartum depression symptoms from unmet physical care needs to past physical history. All causes were mentioned by both sexes. Only men thought that societal expectations contributed to the development of symptoms.</p>	<p>This study provides an understanding of how women and men perceive postpartum symptoms from different perspectives. This is important to enhance the providing of care. Understanding differing views can foster care that is best suited to the couples' view. This helps provide a better plan of care.</p> <p>Studies are suggested to continue.</p>

Citation, Evidence Level and Quality	Purpose of Study	Sample and Setting	Design		Results	Authors' Recommendations
			Methodology	Instruments		
<p>Kozinszky, Z., Dudas, R. B., Devosa, I., Csatornai, S., Toth, E., Szabo, D., Sikovanyecz, J., Barabas, K., & Pal, A. (2012). Can a brief antepartum preventive group intervention help reduce postpartum depressive symptomology? <i>Psychotherapy and Psychosomatics</i>, 81, 98-107. doi: 10.1159/000330035</p> <p>Level: I Quality: Good</p>	<p>To evaluate the effectiveness of a preventive intervention for postpartum depression (PPD) in a naturalistic setting. Also to study the effect of this intervention of social and psychological risk factors.</p>	<p>1719 pregnant women underwent a 4-session preventive group intervention in south eastern Hungary. 710 pregnant women underwent a 4-part preventive group intervention while 1,009 pregnant women received the same information in the usual form of care.</p>	<p>Randomized controlled trial</p>	<p>Leverton Questionnaire, SSPS 14.0 software</p>	<p>The intervention significantly reduced the risk of PPD by 18% in those women with antepartum depression and 0.5% in those with no depression at the time of recruitment.</p>	<p>This preventive antepartum group intervention concentrating on managing stress, fostering coping mechanisms, and developing social support can be helpful in reducing PPD.</p>

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<p>Letourneau, N., Secco, L., Colpitts, J., Aldous, S., Stewart, M., & Dennis, C. (2015). Quasi-experimental evaluation of a telephone-based support intervention for maternal depression. <i>Journal of Advanced Nursing</i>, 71(7), 1587-1599 doi: 10.1111/jan.12622</p> <p>Level: II Quality: Good</p>	<p>To see if telephone based and peer-support (TBPS) interventions decrease the percentage of maternal depression occurrences.</p>	<p>A community – based sample of mothers living in the province of New Brunswick, Canada was studied. Participants spoke English or French, were within 16-45 years old and within 24 months of delivery. Mothers of twins, those taking meds for depression or having history of mental illness were included. n=64</p>	<p>Quasi-experimental study with meta-analysis</p>	<p>Edinburgh Postpartum Depression Scale (EPDS) Social Provision Scale (SPS)</p> <p>All data was entered in to the SPSS database</p>	<p>Depression rates dropped from 15.4% at baseline to 11.8% at completion of program.</p> <p>TBPS is an effective intervention for postpartum depression and should be considered a useful tool in the care of perinatal individuals.</p>	<p>Difficult social support is associated with maternal depression and likely contributes to maternal issues up to two years following delivery. Nurses in acute care and in community settings should consider strategies to integrate social support interactions (mostly peer support) in care of new mothers during the first two years.</p>

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<p>Miniati, M., Callari, A., Calugi, S., Rucci, P., Savino, M., Mauri, M., & Dell’Osso, L. (2014). Interpersonal psycho-therapy for postpartum depression: A systemic review. <i>Archives of Women’s Mental Health, 17</i>, 257-268. doi: 10.1007/s00737-014-0442-7</p> <p>Level: II Quality: High</p>	<p>To review the evidence of efficacy in interpersonal psychotherapy (IPT) for postpartum depression (PPD).</p>	<p>A review was conducted of studies published between 1995 and April 2013 assessing efficacy of IPT for PPD. Eleven clinical primary trials looked at the efficacy of IPT for PPD, including 3 trials with group interventions (G-IPT) and one that required the presence of the partner (PA-IPT).</p>	<p>Systematic review of literature</p>	<p>Edinburgh Postnatal Depression Scale (EPDS), Beck Depression Inventory (BDI), Hamilton Depression Rating Scale (HDRS) Social Adjustment Scale Self Report (SAS-SR)</p>	<p>All patients displayed reductions in depressive symptoms before delivery (three months prior) and six months following. Enhanced IPT prevented depressive relapse and improved social functioning up to 6 months postpartum.</p>	<p>IPT should be considered one of the first line treatments for PPD regarding mild and moderate forms of depression. Data supports the efficacy to individual and group IPT for PPD. Women with PPD frequently prefer psychotherapy over treatment with medication due to concerns about exposure to antidepressants and the effects on the infant.</p>
Citation, Evidence Level and Quality	Purpose of Study	Sample and Setting	Design		Results	Authors’ Recommendations
			Methodology	Instruments		

<p>Neiman, S., Carter, S., Van Sell, S., & Kindred C. (2010). Best practice guidelines for the nurse practitioner regarding screening, prevention, and management of postpartum depression. <i>Critical Care Nurse Quarterly</i>, 33 (3), 212-218.</p> <p>Level: II Quality: High</p>	<p>To form a method for educating nurses regarding the epidemiology, signs, symptoms, management, complications and risk factors of postpartum depression (PPD).</p>	<p>The literature review was conducted using electronic databases including CINAHL, Cochrane Library, National Guideline Clearinghouse, Medline, PubMed, Ovid, Elsevier, and Science Direct in addition to the World Wide Web through Google Search. Medical and nursing books were also used.</p>	<p>Systematic literature review</p>	<p>Edinburgh Postnatal Depression Scale (EPDS) Postpartum Depression Predictor Inventory-Revised (PDPI-R) Postpartum Depression Screening Scale (PDSS)</p>	<p>Mass screening for PPD using validated screening tools has been deemed effective in improving rates of catching and treating PPD. Evidence from studies indicates that the EPDS is the best screening tool for identifying women at risk for PPD. EPDS should be used for mass screening.</p>	<p>Early identification, screening prevention and treatment of PPD are imperative for improving the outcomes of the mother-infant dyad. It is crucial that nurses understand and teach the risk factors regarding signs, symptoms, prevention, and interpretation of screening tools of referral for the treatment of PPD.</p>
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Evidence Level and Quality	Study	Setting	Methodology	Instruments		Recommendations
<p>Ngai, F. W., Chan, S.W. C., & Ip, W. Y. (2009). The effects of a childbirth psychoeducation program on learned resourcefulness maternal role competence and perinatal depression: A quasi-experiment. <i>International Journal of Nursing Studies</i>, 46(10), 1298-1306. doi: 10.1016</p> <p>Level: II Quality: Good</p>	<p>To learn the impact of childbirth education programs based on the resourcefulness of the mother's role, competence, and depressive symptoms in childbearing women.</p>	<p>Convenience sampling was utilized. One hundred and eighty-four Chinese women were recruited for childbirth education. Inclusion criteria was primiparous women with a singleton, and an uneventful, pregnancy. Gestation must be between 12 and 35 weeks and no familial psychiatric illness history.</p>	<p>Quasi-experimental study</p>	<p>Edinburgh Postpartum Depression Scale (EPDS) Self-Control Schedule (SCS) Parenting Sense of Competence Scale-Efficacy (PSCS-E)</p>	<p>Those receiving psycho-education saw improvement in resourcefulness at six weeks postpartum compared to those who received only standard education. Overall reduction in depression was found at six months in the psycho-educated group.</p>	<p>Additional research and work is encouraged to determine if extending resources into childbirth programming does, in fact, minimize the risk of perinatal depression.</p>

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Evidence Level and Quality	Study	Setting	Methodology	Instruments		Recommendations
<p>Sockol, L. E., Epperson, C. N., & Barber, J. P. (2013). Preventing postpartum depression: A meta-analytic review. <i>Clinical Psychology Review, 33</i>, 1205-1217. doi: http://dx.doi.org/10.1016/j.cpr.2013.10.004</p> <p>Level: II Quality: Good</p>	<p>To assess the efficacy of a wide range of preventative interventions designed to reduce postpartum depressive symptoms or decrease the regularity of postpartum depressive episodes.</p>	<p>Relevant studies were located through PsychInfo and PubMed through 2012. Keyword search terms used were postpartum depression (PPD) and prevention. Eligible studies included those regarding full texts articles on depression, symptoms and depression diagnosis.</p>	<p>Quasi-experiment with meta-analysis</p>	<p>Edinburgh Postnatal Depression Scale (EPDS)</p>	<p>By six months postpartum, the interventions were associated with a 27% reduction in the rate of depressive episodes and a reduction in the levels of depressive symptoms compared to the controls.</p>	<p>Additional research is needed to confirm and extend the results of these studies. However, the results suggest a) there were no differences between types of psychotherapeutic interventions – they appeared to have comparable efficacy; b) a wide range of interventions should be targeted for further investigation as preventative interventions for PPD.</p>

Citation, Evidence Level and Quality	Purpose of Study	Sample and Setting	Design		Results	Authors' Recommendations
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<p>Top, E. D., & Karacam, Z. (2016). Effectiveness of structured education in reduction of postpartum depression scores: A quasi-experimental study. <i>Archives of Psychiatric Nursing, 30</i>, 356-362. doi: 10.1016/j.apn.2015.06.000.</p> <p>Level: II Quality: Good</p>	<p>To determine whether nurses' home visits decreased severity of postpartum depression (PPD) and improved mother-baby bonding.</p>	<p>The study began with included 103 Turkish women in a convenience sampling; 52 women were in the intervention group, 51 were in the control group. The individuals were not randomized; however, the health care centers were randomly assigned.</p>	<p>Quasi-experimental study</p>	<p>Edinburgh Postnatal Depression Scale (EPDS), Multi-dimensional Scale of Perceived Social Support (MSPSS), SPSS 18 Stats Program</p>	<p>PPD was similar in both groups before education. Following education, PPD was significantly lower (intervention 7.7% vs control 25.5%). This finding suggests that structured education may be an effective way to assist mothers against PPD and promote maternal health.</p>	<p>The study discovered that education offered by a nurse utilizing a structured education program during home visits reduced PPD scores and lowered the numbers of women having depression.</p> <p>It is recommended that nurses introduce this type of education into the first line of health care so it can become widespread.</p>

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Evidence Level and Quality	Study	Setting	Methodology	Instruments		Recommendations
<p>Werner, E., Miller, M., Osborne, L. M., Kuzava, S., & Monk, C. (2015). Preventing postpartum depression: Review and recommendation <i>s. Archives of Women's Mental Health, 18</i>, 41-60. doi: 10.1007/s00737-014-0475-y</p> <p>Level: III Quality: Good</p>	<p>A review to study the existing approaches toward postpartum depression (PPD) and determine their efficacy.</p>	<p>Forty-five randomly controlled trials (RCT) were identified and found to meet inclusion criteria for this qualitative study. Eight RCTs were of biological interventions and 37 were of psychological interventions. Limited to Pub Med studies of postpartum depression (PPD) prevention.</p>	<p>Qualitative Study</p>	<p>Hospital Anxiety and Depression Scale, Structural Clinical Interview for DSM-IV (SCID-5), Montgomery-Asberg Depression Rating Scale (MADRS), Edinburgh Postnatal Depression Scale (EPDS), Beck Depression Inventory (BDI), Interpersonal Therapy (IPT)</p>	<p>Results were mixed; 20 of the studies displayed positive effects of various interventions and 25 studies showed no effect. The studies varied in screening, populations and interventions regarding PPD. There was a higher rate of success with individual intervention that with group intervention</p>	<p>Many interventions appear promising for future research, focusing on assisting with changing parent behavior such as improved sleep, changing interactions with fussy infants and concentrating on the mother/child dyad. Preventive measures may be of particular interest in providing focus on individual education regarding the mother-infant dyad.</p>
Citation,	Purpose of	Sample and	Design		Results	Authors'

Evidence Level and Quality	Study	Setting	Methodology	Instruments		Recommendations
<p>Wisner, K., L., Sit, D. K. Y., Mc Shea, M. C., Rizzo, D. M., Zoretich, R. A., Hughes, C. L., . . . Confer, A. L. (2013). Onset timing, thoughts of self-harm, and diagnosis in postpartum women with screen-positive depression findings. <i>JAMA Psychiatry, 70(5), 490-498</i>. doi: 10.1001/jamapsychiatry.2013.2013.87 Level: III Quality: Good</p>	<p>To screen for depression in postpartum women. To evaluate findings that determine onset, rate and intensity of self-harm ideation, DSM-IV diagnoses and direct treatment and policy making.</p>	<p>10,000 mothers were screened. They were offered screening during maternal hospitalization in an urban women's hospital at 4 and 6 weeks postpartum. The screenings took place at their homes.</p>	<p>Structured clinical interview</p>	<p>Edinburgh Depression Postnatal Scale (EDPS)</p>	<p>Positive findings occurred in 14% of the women. Screen positive women were most likely to be younger, African American, publically insured, single and less educated. More episodes began postpartum (40%), followed by prenatally (33.4%).</p>	<p>Use of mental health care is limited for those with limited resources and for minority women with PPD. Data suggest consideration of screening during pregnancy to identify psychiatric disorders and to intervene as early as possible in the episodic course.</p>

Citation, and Evidence Level and Quality	Purpose of Study	Sample and Setting	Design		Results	Authors' Recommendations
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<p>Xie, R. H., He, G., Koszycki, D., Walker, M., & Wen, S.W. (2009). Prenatal social support, postnatal social support, and postpartum depression. <i>Annals of Epidemiology</i>, 19(9), 637-643. doi: 10.1016/j.annepidem.2009.03.008</p> <p>Level: III Quality: Good</p>	<p>To determine the association of antenatal and postnatal support with post-partum depression (PPD).</p>	<p>A prenatal survey of 534 women completed a prenatal survey. These same women completed a survey at two weeks' post-partum. The average age of the surveyed women was 28.3 years. Half of the women had a university education.</p>	<p>Prospective cohort study</p>	<p>Social Support Rating Scale, (SSRS) Edinburgh Postnatal Depression Rating Scale (EPDS)</p>	<p>Of the 534 women studied, a total of 103 women experienced PPD. Women with low prenatal and postnatal social support had higher rates of PPD. This study replicates earlier studies that indicate low post-partum support is a consistent risk factor in developing PPD.</p>	<p>Limited social support is a risk factor in the development of PPD.</p> <p>The association between limited postnatal support and PPD is stronger than limited prenatal social support and PPD.</p>

