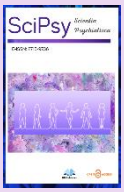

Scientia Psychiatrica

Journal Homepage: www.scientiapsychiatrica.com

eISSN (Online): 2715-9736

Postpartum Depression: A Literature Review of Screening and Prevention

Hana Andrina[1*]

[1] Specialized Residency Training, Department of Obstetrics and Gynecology, Faculty of Medicine, Universitas Sriwijaya/ Dr. Mohammad Hoesin General Hospital, Palembang, Indonesia

ARTICLE INFO

Keywords:
Domestic Violence
Pregnancy
Mental Health Disorders

***Corresponding author:**
Hana Andrina

E-mail address:
hana.andrina@gmail.com

All authors have reviewed and approved the final version of the manuscript.

https://doi.org/10.37275/scipsy.v2i4.64

ABSTRACT

Pregnancy is a complex and vulnerable period that presents a number of challenges to women, including the development of postpartum psychiatric disorders. These disorders can include postpartum depression and anxiety, which are relatively common, and the rare but more severe postpartum psychosis. In addition, other postpartum psychiatric disorders can include obsessive-compulsive disorder, post-traumatic stress disorder and eating disorders. The etiology of postpartum psychiatric disorders is a complex interaction of psychological, social and biological factors, in addition to gen etic and environmental factors. The goals of treating postpartum mental illness are reducing maternal symptoms and supporting maternal -child and family functioning. Women and their families should receive psychoeducation about the illness, including evidence-based discussions about the risks and benefit s of each treatment option. In this article, we would like to focus on postpartum depression (PPD). Identifying and treating this problem can reduce the alarming number of suicides among depressed perinatal women and the possible adverse effects of untreated maternal depression on their child' s cognitive and behavioral development. Developing effective strategies in global settings that allow the delivery of targeted therapies to women with different clinical phenotypes and severities of PPDs is essential. In this review, we discuss the latest developments in screening, treatment, and prevention methods.

1. Introduction

Depressive disorders are common in women of reproductive age and may begin during pregnancy or the postpartum period. Prevalence estimates in developed countries range from 1.0% to 5.6% for major depression alone and from 6.5% to 12.9% for major and minor depression at different points in pregnancy through 12- months postpartum. Studies focusing on the first 3- months postpartum show higher rates: 7.1% for major depression alone and 19.2% for major and minor depression combined.[1] Women have an increased susceptibility of developing depressive episodes during the perinatal period. While the negative consequences of depression outside the perinatal period are well-known (e.g., increased risk for addiction, suicide, self-injury, reckless behavior, relationship concerns, and poor health), the repercussions resultant of postpartum depression (PPD) extend beyond those previously mentioned. PPD can interfere with normal maternal-infant relationship development and adversely affect child development.[2]

The birth of a child most often evokes maternal feelings of happiness and joy, but much less attention is paid to the fact that postpartum depression (PPD) is also present for many new mothers. The conflict between the positive emotions that new mothers often think they should feel and the reality of depressed mood and anxiety that many of them actually experience can be confusing and overwhelming. Women may expect that these symptoms will subside without treatment, and this is generally the case for postpartum blues, a milder mood disruption within the first 10 days after delivery. However, PPD is a

clinical condition that lasts for at least two weeks, creates significant impairment in functioning, and typically requires professional treatment.[3]

In 2009, the US Preventive Services Task Force (USPSTF) recommended screening adults for depression when staff-assisted depression care supports are in place to ensure accurate diagnosis, effective treatment, and follow-up (B recommendation). The USPSTF recommended against routinely screening adults for depression when such support is not in place but acknowledged there may be considerations that support screening for depression in an individual patient (C recommendation).[4]

While the goal of treatment is to alleviate symptoms among individuals experiencing a given disorder, preventive interventions are intended to avoid the initial onset of disorder. Emotional and behavioral difficulties are commonly identified and treated only after the onset of illness, but prevention of these disorders can significantly reduce the human and economic costs associated with mental illness. A recent review of progress that has been made in the field of depression prevention identified the implementation of interventions with strong evidence of effectiveness as a major goal for ongoing research in this area. In order for this goal to be reached, it is necessary to identify characteristics of effective preventive interventions.[2,4]

2. Methods

The researcher searched for all studies published between 1st January 2010 and 1st August 2021, using the following database: PubMed. The following keywords were applied in the database during the literature search: “Postpartum Depression” OR “Postnatal Depression” OR “Puerperal Depression” AND “Screening” AND “Prevention”. The research was limited to human studies published in the English language. Additional studies were identified through a manual search of the bibliographic references of the relevant articles and existing reviews. The inclusion criteria were as follows: studies that included mothers of all ages who suffered from PPD (all combinations of comparison groups were possible: PPD vs no PPD, severe PPD vs mild PPD, etc.); and studies that included health (physical or psychological) or social outcomes of PPD in the results. The exclusion criteria were as follows: studies that included mothers who received treatment for PPD, studies that covered interventions that were purely educational (i.e., booklet or video with no human intervention) as well as those and studies limited to persons with other medical or mental health conditions were excluded. One hundred and nine articles were identified. Abstracts were reviewed by researcher and 78 did not meet inclusion criteria and were eliminated. The researcher then reviewed full text of the remaining 31 articles, and reference sections of these articles were cross-checked for additional material. After full-text review, an additional 19 articles did not meet inclusion criteria. A total of 12 articles were identified that met inclusion and exclusion criteria.

3. Results

Screening Tools for Postpartum Depression

Screening tests are evaluated against a diagnostic gold standard. For depressive disorders the gold standard is a structured interview that will reveal all of the components defined by the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). Screening tools for depression focus on major depressive disorder (MDD), which is distinct from premenstrual dysphoric disorder, persistent depressive disorder (dysthymia), and depression due to another medical disorder or induced by medications or other substances. MDD subtypes include onset during pregnancy or within 4 weeks after delivery (peripartum depression) and a variety of other subtypes based on prominent features (anxiety, melancholia, catatonia, atypical mixed) or timing (seasonality). Pregnant women can be found to have preexisting MDD, new onset depression in the peripartum period, or incident depression later in the postpartum period. The definitions that follow demonstrate what diagnostic information may be missed by screening tools for the depressive disorders

most commonly found in women, potential leading to what may be falsely regarded as a positive result of screening.1 The ideal screening test is inexpensive, easy to administer, and causes minimal discomfort to patients. Important statistical properties include high reliability (consistency across testing situations) and validity (ability to distinguish depressed from nondepressed patients). A diagnostic clinical interview is the gold standard for establishing a diagnosis of MDD and postpartum depression. Comparing a screening test result with the gold standard allows investigators to calculate test accuracy (proportion of screened population with true positive and true negative results), sensitivity (proportion of depressed patients detected by a positive screening test) and specificity (proportion of nondepressed patients detected by a negative screening test).[1]

The EPDS was introduced in 1987 as a screening tool in ambulatory settings and has been used extensively in the US and Spanish speaking countries. It includes 10 questions regarding symptoms in the past week and can be completed in <5 minutes. Studies validating the EPDS compared different score thresholds (from 9 to 13 points) against a gold standard interview and found the expected trade-offs. The most commonly used threshold scores are =10 or =12 points. Lower thresholds increase test sensitivity while decreasing specific and increasing false positive screening results. Developed initially in 2000 the PDSS includes 35 items and can be completed in 5 to 10 minutes and is available in Spanish. Items assessing MDD symptoms and other elements characterizing postpartum depression are included in the questionnaire's 7 domains: sleeping/eating disturbances, anxiety/insecurity, emotional lability, mental confusion, loss of self, guilt/shame, and suicidal thoughts. Sensitivity and specificity are within the range of other screening tools. A threshold score of 60 is a positive screen for major or minor postpartum depression, and a score of 80 defines a positive screen for major postpartum depression. The higher threshold has lower sensitivity (more false positives).

Table 1. Screening Tools for Depression in Pregnancy and Postpartum

Screening Tools	**No. Item**	**Time to Complete (Min)**	**Sensitivity and Specificity**	**Spanish Available**
Edinburgh Postnatal Depression Scale	10	<5	Sensitivity 59-100 Specificity 49-100	Yes
Postpartum Depression Screening Scale	35	5-10	Sensitivity 91-94 Specificity 72-98	Yes
Patient Health Questionnaire-9	9	<5	Sensitivity 75 Specificity 90	Yes
Beck Depression Inventory	21	5-10	Sensitivity 47.6-82 Specificity 85.9-89	Yes
Beck Depression Inventory II	21	5-10	Sensitivity 56-57 Specificity 97-100	Yes
Center for Epidemiologic Studies Depression Scale	20	5-10	Sensitivity 60 Specificity 92	Yes
Zung Self-Rating Depression Scale	20	5-10	Sensitivity 45-89 Specificity 77-88	No

Table 1 lists key characteristics of recommended screening tools for depression in pregnancy and the postpartum period. The Edinburgh Postnatal Depression Scale (EPDS), and the Postpartum Depression Screening Scale (PDSS) were developed

specifically for postpartum depression and validated in perinatal populations.[1]

Classifying peripartum depression as a variant of major depression spurred evaluation of MDD screening tools that were initially developed for the general Population. The Patient Health Questionnaire (PHQ) was introduced in 1999 as a self-administered version of a validated tool (PRIME-MD). The PHQ-9 assesses the frequency of all the MDD symptoms in the past 2 weeks (scored from 0 to 3) and is closely aligned with current diagnostic criteria. The PHQ-9 was validated in large samples of women before it was tested for use in pregnancy and the postpartum period. The threshold score of 10 (of 27 possible points) is a positive screening result for at least mild depression, and a score of 20 is consistent with severe depression.[1]

The Beck Depression Inventory (BDI) was developed in 1961 and updated (BDIII) in 1996 to reflect the revised depression diagnostic criteria in the Fourth edition of the DSM. It includes 21 items in which patients select 1 of 4 first-person statements that best fits how they feel today. Each item is scored from 0 to 3 and there are 63 total points possible. The threshold scores are 14 for mild depression, 20 for moderate depression, and 29 for severe depression.[1]

The Center for Epidemiologic Studies Depression Scale (CES-D) was developed in 1977 as a tool for population-based research. It includes 20 items assessing mood symptoms in the past week. Each item is scores from 0 to 3 and there are 60 points possible. A score of =15 is the screening threshold for depression risk.[1]

The Zung Self-Rating Depression Scale was developed in 1965. It includes 20 positive and negative statements answered on 4-point Likert scales. The screening threshold is 50 (of 80 possible points) and severe depression is more likely when the score is at least 70. The screening questionnaires for depression are more common than they are different. All are self-administered and can be completed in <10 minutes, with the majority taking ≤ 5 minutes.[1]

Screening guidelines

In the past several years several organizations have updated their screening guidelines for depression in pregnancy and the postpartum period. The American College of Obstetricians and Gynecologists (ACOG) recommends screening for depression and anxiety at least once during the perinatal period using a validated, standardized tool. In 2013 ACOG convened a Well- Woman Task Force to develop a consensus among 15 leading professional associations representing women's health clinicians from obstetrics and gynecology, pediatrics, primary care, and nursing backgrounds. The Task Force recommended annual and postpartum depression screening using a validated tool.[1]

In 2016 the US Preventive Services Task Force (USPSTF) completed an extensive evidence review and recommended screening for depression in the general adult population, including pregnant and postpartum women. The recommendation's "B" grade indicates high certainty of at least moderate benefit from depression screening. Importantly, USPSTF underscored that for screening to be effective, adequate systems must exist to ensure accurate diagnosis, effective treatment, and appropriate follow up. Taken together these recommendations form a consensus that patients entering pregnancy should be screened for depression unless they have already been screened in the past year, and then screened again for postpartum depression.[1]

On the basis of accessibility, tools such as the EPDS and PHQ-9 are preferable because they are shorter, accessible by website and smartphone applications, available in multiple languages, and inexpensive. A systematic review in 2013 identified only 11 studies evaluating the sensitivity and specificity of commonly used tools. A head-to-head comparison of EPDS and PHQ-9 administered with 185 pregnant and postpartum women showed both tools had comparably high sensitivity, specificity, and predictive capabilities. EPDS was evaluated in 11 studies, PDSS in 4 studies, BDI in 4 studies, PHQ-9 in 1 study, Zung in 1 study, and CES-D in 1 study. Most

studies reported high sensitivity and specificity (80% to 90%). Lower thresholds increased sensitivity but also increased the rate of false positives. All positive screening results should be followed by an interview to confirm the frequency and severity of symptoms, address safety risks, screen for symptoms of mania and psychosis, and evaluate the patient for chronic conditions, medications, and other substances that can produce depressive symptoms.[1]

Two universal screening programs used different strategies to address barriers successfully. Kaiser Permanente Northern California used a quality improvement process to introduce universal screening over several years throughout their system of 15 obstetrical hospitals. Patients were screened using PHQ- 9 at prenatal intake, 24 to 28-week gestation, and 3 to 8- week postpartum. Facility champions were appointed to lead training efforts at their hospitals so clinicians would have the necessary skills and resources to assess, diagnose, and treat patients with a positive screening test. Workflow improvements and use of electronic health records facilitated screening and clinical monitoring.

Referrals were made to mental health providers if clinically indicated and acceptable to the patient. In total, 54% (3% of 5.6%) who screened positive for severe depression were subsequently diagnosed with moderate to severe depression. Of diagnosed patients 80% were treated 40% met the goal of at least 50% improvement, and 25% had a clinical remission of depression symptoms. Obstetrical leaders at Massachusetts General Hospital transitioned a targeted screening program to universal screening after mandatory statewide reporting was introduced in 2010.1,6 All obstetrical patients in the 2 largest outpatient prenatal clinics were screened using EPDS at 24 to 28-week gestation and 6-week postpartum. Licensed clinical social workers (LCSWs) stationed in the clinics evaluated all screen-positive patients and triaged them to care by an LCSW, clinical psychologist, or psychiatrist. Among the women who screened positive 67% were subsequently diagnosed with MDD, 37% were diagnosed with an anxiety disorder, and 28% were diagnosed with both. Approximately one third of screen-positive patients were subsequently treated with antidepressant medication.[1]

Comparing the 2 screening programs allows identification of common themes and different approaches that produced successful outcomes (Table 2). The Kaiser Permanente Northern California program empowered and trained care providers across a large network to interpret PHQ-9 screening results, make diagnoses, and arrange or prescribe treatment, with judicious use of mental health resources. The 2 programs prioritized keeping care local (which patients prefer), used system-wide screening tools, used standardized procedures for interpreting screening results and arranging subsequent care for screen-positive patients, and accessed a variety of care options that were financially and geographically accessible to patients.[1,5,6]

Table 2. Charateristics of 2 Universal screening[1,5,6]

Setting and Population Screened	Implementation andKey Components	Screening Schedule	Screening Tool and Threshold Score	% Screened Screen-Positive	Rate	Action and Outcomes After Positive Screen
Kaiser Permanente Northern California5 37.660 women giving birth in 15 obstetrical hospitals in a 14 country system during 2014	Quality improvement Predefined depression care goals Extensive clinician training resource and development Use of EHR to store and trend PHQ-9 results Quarterly data to drive improvement	First prenatal visit 24-28 week 3-8 week postpartum visit	PHQ-9 ≥ 10 (depression) PHQ-9 ≥ 15 (moderate to severe depression)	90% at least once Average 2.7 total screen per patient	14% depression, 5,6% severe depression	54% with PHQ-9 ≥ 15 had moderate-severe MDD 80% treated 40% met care goal 25% clinical remission
Massachusetts General Hospital6 8985 women enrolled in prenatal care at 2 largest outpatient OB sites from 2010 to 2014	Compliance with statewide reporting mandate Real-time EPDS scoring and EHR entry Onsite LCSW for evaluation and referral Onsite mental health cilinicians	24-28 week gestation 6 week postpartum	EPDS ≥ 12 (depression)	98% in pregnancy 86% in postpartum	6,5%	67% MDD 37% anxiety disorder 35% antidepressant medication

Preventions and interventions

Results of these analyses suggest that a wide range of interventions may be effective in the prevention of depression during the first 6 months postpartum. These interventions result in small but significant reductions in depressive symptoms (g =0.18) and the prevalence of depressive episodes (OR = 0.73). Although the magnitude of the effects of preventive interventions are modest compared to treatments for postpartum depression, which a previous meta-analysis found to be in the medium range, the efficacy of these interventions is comparable to, or exceeds, the efficacy of preventive interventions for anxiety and depression from other meta-analyses. The overall level of depressive symptoms by six months postpartum in both treatment and control conditions were below generally accepted cutoffs for clinically significant depressive symptoms.[8]

For both depressive symptoms and depression diagnosis, a later assessment was associated with a smaller difference between intervention and control conditions. This is consistent with the results of a meta- analysis of treatments for postpartum depression, which found that greater treatment length was associated with smaller effect sizes. Moreover, it is consistent with evidence that postpartum depression tends to naturally remit over time. Given that the natural course of postpartum depression is for symptom severity to decrease over time, it is unsurprising that preventive interventions appear to be most efficacious when they are assessed early during the postpartum period. However, this should not be taken as an indication that preventive interventions are unnecessary. Given the adverse impact of depression on depressed women and their children even a self-limiting depressive episode may be

extremely distressing and increase the risk for long-term negative outcomes.[8]

Higher levels of depressive symptoms at pre-treatment were associated with smaller differences in depressive symptoms by six months postpartum between treatment and control conditions in studies that used the EPDS as a measure of depressive symptoms. As this result was only found in one of our analyses, and for only one measure of depressive symptoms, this result should be interpreted with caution. However, if this finding represents a true difference in the efficacy of preventive interventions, this suggests that preventive interventions might be more effective for women who are not yet experiencing significant levels of depressive symptoms. The duration or intensity of preventive interventions may not be sufficient to prevent the onset of depressive episodes or worsening of symptoms among this population. Interestingly, we found that intervention type was not related to the effectiveness of treatments for either reducing depressive symptoms or preventing depressive episodes. A lack of social support is an established risk factor for postpartum depression. It may be that nonspecific social contact and support is sufficient for reducing risk for depression among this population and that the specific active elements of treatment are less important. However, further research assessing the efficacy of less well-studied interventions is necessary to determine whether our failure to identify moderators simply results from a lack of sufficient evidence. Given the small number of studies representing antidepressant medication and nontraditional interventions, particularly dietary supplements and hormonal interventions, further research is necessary to establish whether these approaches are truly equally efficacious.[2]

There were relatively few studies assessing antidepressant medication, dietary supplements, educational interventions, hormonal interventions, and social support programs. More research assessing the efficacy of these interventions is necessary in order to establish whether there are systematic differences between types of interventions. Similarly, psychotherapy was the only type of intervention for which enough studies were present to assess for potential moderation of specific aspects of the intervention. Further evaluation of other types of interventions would allow for similar questions to be asked of these interventions; for example, whether phone-based social support programs have comparable efficacy to in-person support groups. Due to inconsistencies across studies in the reporting of demographic characteristics, we were also unable to assess these as potential moderators. Future research should help clarify whether particular interventions are more effective for specific populations, especially women of low socioeconomic status, ethnic/racial minorities, and single women who are at higher risk for postpartum depression.[2]

To date, there have been very few RCTs on the prevention of PPD using biological interventions. Existing studies include treatment with antidepressants, hormones, omega-3 fatty acids, dietary calcium, thyroxine, and selenium and have met with mixed success. Psychotropic medications Only one RCT has evaluated antidepressant medications. This study, a follow-up to a 2001 open-label trial by the same group of nortriptyline versus monitoring, was started within 24 h of delivery in nondepressed women with a history of at least one episode of PPD. Twenty-two women were randomized at parturition to a 17-week trial of sertraline or placebo. The researchers found that sertraline was significantly more effective than placebo at preventing recurrence of depression (as measured by the Hospital Anxiety and Depression Scale (HADS) and the Structured Clinical Interview (SCID) for DSM-IV; $p=0.04$).[9]

Estrogen and progesterone levels fluctuate dramatically during the perinatal period, increasing tenfold during pregnancy and returning to pre-pregnancy levels within 72 h of delivery. This rapid hormonal decline is thought to contribute to PPD in vulnerable women, although a consistent link between hormone levels and PPD has yet to be demonstrated. High-dose estrogen, in which it was found to improve

the rate of relapse among women with a history of PPD), may be one promising direction, but only one RCT has evaluated hormone administration as a prevention for PPD. In a double-blind trial of 180 South African women in the general population who were not screened for antenatal depression, Lawrie et al showed that women who were randomized to an intramuscular injection of 200 mg norethisterone enanthate (a common progestogen contraceptive) within 48 h of delivery had significantly higher scores on the Montgomery–Asberg Depression Rating Scale (MADRS) and EPDS at 6 weeks postpartum than women in the placebo group (p=0.0111 and p=0.0022, respectively).[9,10]

4. Discussion

Perinatal or postpartum depression is thought to be the result of a complex interaction involving genetics, epigenetics, the neuroendocrine hypothalamic- pituitary-adrenal axis, and environmental and social factors. No race or socioeconomic group is spared. Some women are more sensitive to changes in their reproductive hormone levels during pregnancy and after delivery, which may make them more susceptible to perinatal depression. Some may also have an unrecognized underlying mood disorder.[7]

Even when everything seems to be going well, the majority of women seem to feel fears or anxiety at the beginning of maternity given the sudden changes in their role. It is normal for mothers to be worried about the safety and well-being of their child. Nevertheless, given all the identity disturbances related to the arrival of a baby, it is not uncommon for women to encounter episodes of psychological distress of varying duration and degrees of severity during the postnatal period. Childbirth may be a traumatic experience for a woman. A lack of social support, pain during the first stage of labor, feelings of powerlessness, unfulfilled expectations, and negative interactions with medical personnel are examples of factors that can influence the perception of a traumatic experience following childbirth. These findings suggest several intervention points for health care practitioners, including opportunities to discuss the birth during the postpartum period.[11]

There are numerous examples of screening programs that have already been implemented in pregnancy or postpartum. In the US, at least 10 states have active legislation related to screening for postpartum depression. The first of these programs, the New Jersey Postpartum Wellness Initiative, has required, since 2006, depression screening of women who have recently given birth. A 2011 analysis of the effects of the program, however, did not find any increase in postpartum depression treatment or follow-up care among Medicaid recipients following implementation. In the UK, beginning in 1999, the National Service Framework for mental health has required protocols for the management of postnatal depression, which has resulted in widespread implementation of screening strategies, although, similarly, without documented evidence of benefit. The present systematic review did not find any well-designed and conducted RCTs that tested whether depression screening in pregnancy or postpartum is effective, with or without enhanced, staff-assisted depression care for women identified as depressed. Without evidence from RCTs that depression screening would benefit patients, the possibility of adverse events due to depression screening should be considered. These may include a high rate of false positive findings and potentially costly referrals and diagnostic workups for some non-depressed women, the potentially adverse effects of labelling, and the costs and adverse effects of referral and treatment for some women who are not depressed. Treatment options for women identified as depressed via screening include psychological treatments and pharmacotherapy, although women may have concerns about taking antidepressants during pregnancy due to reports of possible negative effects on fetal development. In a recent meta-analysis of 23 observational studies, for instance, the use of antidepressants during the gestational period was associated with an increased risk of preterm delivery,

lower birth weights, and lower Apgar scores. Furthermore, certain antidepressants, such as selective serotonin reuptake inhibitors, have been associated with an increased risk of congenital malformations (such as congenital heart defects), and persistent pulmonary hypertension of the newborn. The majority of studies that have investigated the potential harms of antidepressants during pregnancy and postpartum have been conducted among patients already diagnosed and treated with these agents before pregnancy. Women who are identified as depressed during pregnancy and postpartum via screening, but who would not have been recognized without screening, may have relatively lower severity depression, and the risk-benefit ratio of using antidepressants needs to be considered in this context and included in discussions of treatment options.[2,9]

Interventions were associated with a 39% decrease in the likelihood of perinatal depression in women who were at risk for depression and had been involved in therapeutic interventions before the onset of depression. Women who received counseling had one of the following risk factors: a personal or family history of depression, a history of physical or sexual abuse, socioeconomic insecurity, or recent negative life events. Two specific treatments had the greatest effect: interpersonal therapy and cognitive behavioral therapy, in either an individual or a group setting. Counseling sessions averaged 8 weeks in duration. The USPSTF concluded that counseling interventions can be effective in preventing perinatal depression in pregnant or postpartum women with an elevated risk of perinatal depression.[7]

In these analyses, we found no differences between types of interventions, and different types of psychotherapeutic interventions appeared to have comparable efficacy. There were few studies assessing antidepressant medication and other non-therapeutic interventions; more research is necessary to assess whether these interventions are effective and to establish whether characteristics of other intervention types are related to efficacy. Although more research is needed to confirm and extend the results of these meta-analyses, these results suggest that a wide range of interventions should be targeted for further investigation as preventive interventions for this disorder.[2]

5. Conclusion

This literature review provides an update of published literature on interventions using a trial design to prevent the onset of postnatal depression and anxiety. A total of 12 papers were identified for inclusion for this review. We conclude that maternal postnatal depression has negative consequences for both mothers who suffer from this pathology and their children up to 3 years of age. PPD has important impacts, mainly on mothers' psychological health, quality of life, and interactions with their infant, partner, and relatives. Depressed women are caught in a vicious circle in which they become sadder and angrier and have increasingly lower perceptions of their competence. The accumulation of these elements creates an environment that is not conducive to the personal development of mothers or the optimal development of a child.

Universal screening for depression in pregnancy and the postpartum period is critical for improving detection and facilitating treatment. On the basis of the successful programs described previously, all pregnant patients should be routinely screened in the third trimester and again in the postpartum period. Additional screening should be considered at the first prenatal visit if not done in the previous year. Effective screening tools include those developed specifically for postpartum depression, such as EPDS, and screening tools for MDD that have been evaluated in pregnant and postpartum women, such as PHQ-9. Universal screening programs for depression during pregnancy and the postpartum period can successfully overcome patient, clinician, and system barriers to reduce the burden of disease. Components common to successful programs include the use of clear clinical pathways for diagnosis and treatment, and use of the electronic health record to facilitate screening and symptom monitoring. Implementation of universal screening

should be a priority for all health systems providing obstetrical care.[1]

In summary, these analyses suggest that a wide range of interventions are effective in the prevention of postpartum depression. By six months postpartum, these interventions are associated with a 27% reduction in the prevalence of depressive episodes and a reduction in levels of depressive symptoms compared to control conditions. Practical Resources for Effective Postpartum Parenting (PREPP), currently under study, comprises unique targeted psychotherapy techniques along with the established infant behavioral interventions. We hypothesize that women's elicitation of behavioral change from their infants may be protective against PPD through several possible mediating pathways: (1) an increase in parenting efficacy and resulting diminishment of negative self-attributions: (2) an improved sense of social support from coaching sessions by the clinician; (3) better maternal sleep; (4) more effective parenting skills leading to a more responsive and rewarding baby; and (5) increased attachment to infant. This dyadic intervention has the potential to reduce the incidence of PPD in women at risk and to affect directly the developing mother–child relationship, the mother'sview of her child, and child developmental outcomes.[1,9]

6. References

1. Learman, L.A. Screening for Depression in Pregnancy and the Postpartum Period. Wolters Kluwer Health, Inc.2018; 1-8.
2. Sockol, L.E., Epperson, C. N., Barber, J.P. Preventing Postpartum Depression: A Meta-Anaytic Review. Clinical Psychology Review. 2013; 1205–1217.
3. Meltzer-Brody, S., Howard, L.M., Bergink, V., et al. Postpartum Psychiatric Disorders. Nature Reviews: Disease Primers. 2018: 4(18022); 1-18
4. O'Connor, E., Rossom, R.C., Henninger, M., et al. Primary Care Screening for and Treatment of Depression in Pregnant and Postpartum Women Evidence Report and Systematic Review for the US Preventive Services Task Force. Clinical Review and Education: jama.com. 2016; 388.
5. Flanagan T, Avalos LA. Perinatal obstetric office depression screening and treatment: implementation in a health care system. Obstet Gynecol. 2016; 127: 911–915.
6. Venkatesh KK, Nadel H, Blewett D, et al. Implementation of universal screening for depression during pregnancy: feasibility and impact on obstetric care. Am J Obstet Gynecol. 2016; 215:517.e1–517.e8.
7. Van Niel, MS and Payne, JL. Perinatal Depression: A Review. Cleveland Clinic Journal of Medicine. 2020.87(5); 273-276.
8. Sockol, L. E., Epperson, C. N., & Barber, J. P. A meta-analysis of treatments for perinatal depression. Clinical Psychology Review. 2011; 839–849.
9. Werner, E., Miller, E., Osborne, L.M, et al. Preventing Postpartum Depression: A Review and Recommendations. Arch Womens Ment Health. 2015; 41-60.
10. Bloch M, Daly RC, Rubinow DR. Endocrine factors in the etiology of postpartum depression. Compr Psychiatry. 2013. 44(3): 234–246.
11. Slomian, J., Honvo, G., Emonts, P., et al. Consequences of Maternal Postpartum Depression: A systematic review of maternal and infant outcomes. Women's Health. 2019; 1-55.
12. Mahdi, A., Dembinsky, M., Bristow, K., et al. Approaches to the Prevention of Postnatal Depression and Anxiety – A review of the literature. Journal of Psychosomatic Obstetrics & Gynecology. 2018; 1-15.