

# Internal and External Risk Factors for Postpartum Depression: a Systematic Review

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# Internal and External Risk Factors for Postpartum Depression: a Systematic Review

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## ABSTRACT

**Introduction:** Transition period being a parent is a complex psychological process of development. Birth causes changes in the personal and family patterns. Changes in lifestyle, sleep patterns, recreation, family relationship and identity become characteristic of transition period. This transition represents an important life event increasing vulnerability to psychological disorders. Postpartum depression has a high prevalence in community. Results of research conducted Epifanio et al (2015) showed 20.8% of 75 new mothers in Parlemo and Trapani Italy experience postpartum depression within the first month of birth. Postpartum depression has a high prevalence in community. Results of research conducted Epifanio et al (2015) showed 20.8% of 75 new mothers in Parlemo and Trapani Italy experience postpartum depression within the first month of birth.

**Subject and Method:** A systematic review of the international literature published from 2006 through 2015 was performed in Science direct, Pubmed, Plos One, BMC, Researchgate and Elsevier. The inclusion paper: the papers were assessed for potential risk of depression postpartum, an original articles, English or Indonesian language. The exclusion criteria was and case series, case reports, and review articles with no original data. In addition, we excluded studies with < 20 subjects so that the included studies would have sufficient power to examine the association for at least 1 potential risk factor.

**Result:** A total 6 articles met inclusion criteria. The 6 studies used 2 different depression screeners, with Edinburgh Postnatal Depression Scale (83%) and Beck Depression Inventory (17%). One article used a psychosocial risk factor questionnaire that covered key demographic and psychosocial information. Overall, we include 7 potential risk factors. Formula feeding in place of breastfeeding, a history of depression, cigarette smoking, anxiety during pregnancy, major stress event, low social support level and nutrition are those potential risk factors for post partum depression. Table 1 displays the overall trend of association for each potential risk factor.

**Conclusion:** Postpartum depression has various predisposition factors. These factors consists of internal factor such as breastfeeding problem, history of anxiety and depression, smoking and nutrition. The external factors are stress event and social support.

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## I. INTRODUCTION

Transition period being a parent is a complex psychological process of development. Birth causes changes in the personal and family patterns. Changes in lifestyle, sleep patterns, recreation, family relationship and identity become characteristic of transition period. This transition represents an important life event increasing vulnerability to psychological disorders. Postpartum depression is one of the most common psychological disturbances in this developmental crisis. Postpartum depression will elevate maternal and infant morbidity due to disturbances in mother-infant relationship. Various impacts of postpartum depression made this problem into serious psychological disturbance faced by new parents, especially mothers [1].

Postpartum depression has a high prevalence in community. Results of research conducted Epifanio et al (2015) showed 20.8% of 75 new mothers in Parlemo and Trapani Italy experience postpartum depression within the first month of birth. High rates of postpartum depression in mothers also supported by research done on the first day postpartum at the Chaim Sheba Medical Center, Israel, showed 40.4% of 89 mothers experience postpartum depression [2].

The high prevalence of postpartum depression is influenced by internal and external factors. Internal factors such as anxiety during pregnancy, smoking and low income as stressor that contribute to postpartum depression. External factor such as family support also be a determining factor of postpartum depression [1–3]. This paper intend to explore the factors that take a role in the increased incidence of postpartum depression. This research aims to explore the factors that take a role in the increased incidence of postpartum depression.

## I. SUBJECT AND METHOD

A systematic review of the international literature published from 2006 through 2015 was performed in Science direct, Pubmed, Plos One, BMC, Researchgate and Elsevier. The inclusion paper: the papers were assessed for potential risk of depression postpartum, an original articles, English or Indonesian language. The exclusion criteria was and case series, case reports, and review articles with no original data. In addition, we excluded studies with <20 subjects so that the included studies would have sufficient power to examine the association for at least 1 potential risk factor.

## II. RESULTS AND DISCUSSION

### A. Results

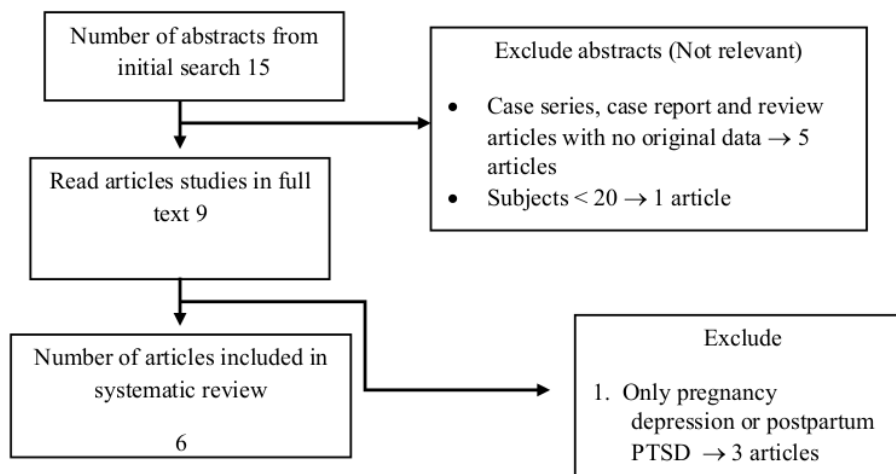


Figure 1: Flow chart of trial selection process for this systematic review

A total 6 articles met inclusion criteria. The 6 studies used 2 different depression screeners, with Edinburgh Postnatal Depression Scale (83%) and Beck Depression Inventory (17%). One article used a psychosocial risk factor questionnaire that covered key demographic and psychosocial information. Overall, we include 7 potential risk factors. Formula feeding in place of breastfeeding, a history of depression, cigarette smoking, anxiety during pregnancy, major stress event, low social support level and nutrition are those potential risk factors for post partum depression. Table 1 displays the overall trend of association for each potential risk factor.

## **B. Discussion**

### **Formula feeding in place of breastfeeding**

One article include breastfeeding problem as a potential risk factor of Postpartum Depression (PPD). The result of those study states that breastfeeding was associated with a significantly lower occurrence of PPD than formula feeding only ( $P < .001$ ). This study report that women who breastfed their infants had significantly lower scores than their nonlactating counterparts on the EPDS [4]. Additional support for the association of breastfeeding with a lower incidence of PPD is provided by Watskin (2011) who observed that, in countries where exclusive breastfeeding is the norm, incidence of PPD peaks at around 9-months postpartum; whereas, in countries where formula feeding is the norm, the incidence of PPD peaks at 3-months postpartum [5].

### **Prenatal and Postpartum anxiety**

Anxiety during pregnancy is judged as one of potential risk factors postpartum depression. Three articles include postpartum anxiety as predisposition factor of PPD. Three studies shows that the existence of a consistent relationship between anxiety during pregnancy can stimulated postpartum depression. Anxiety include fear of childbirth, baby, distrust in the face of labor and lack of confidence in caring for the baby. That stressors will accumulate and cause anxiety prepartum. Unresolved prepartum anxiety will be stressfull life events that will accumulate and will weaken the coping ability of postpartum mothers [2,3,6].

### **Depression history**

Three studies shows depression hystory as predictor of PPD. There was a significant difference in the occurrence of PPD between women who had a history of depression noted in their records and those without a history of depression. That studies found that prenatal depression, in particular, was a strong predictor of PPD [3,4,6].

### **Cigarette smoking**

Smoking is identified as one of abuse history in maternal. In this review two research include smoking as predictor of postpartum depression. Mccoy et al (2006) report that cigarette smoking was associated with a significantly higher occurrence of PPD than was not smoking. Smoking used by mother as destructive coping mechanism. They can't deal with stress event, and then they run off with smoking. These coping mechanism can't deal all the problem so that they feel more depressed with their condition [6].

### Major Stress Event

Life events refer to psychologically significant events that occur in a person's life, such as complication during pregnancy and childbirth, parenthood distress and conflict between family. Two studies report that complication during pregnancy and childbirth has significant effect for postpartum adaptation. Mother who experience bad condition can evoke post trauma stress disorder (PTSD) [4,7]. PTSD condition is associated with severity level of postpartum depression [2].

### Low Social Support

Three studies report that social support give considerable impact for prevention of postpartum depression. Social support can include emotional support, financial, information and awards. With the support system that effective then it will be easier postpartum mothers in developing adaptive coping to adapted the role changes. Family support plays an important role in the prevention of postpartum depression, because family support is a support system for postpartum mothers [3,4,6].

### Nutrition

In one study we found that lower maternal omega-3 index in late pregnancy (week 28) was associated with higher levels of depressive symptoms postpartum. The mother's omega-3 index correlated significantly with the mother's satisfaction with partner relationship [8].

### III. CONCLUSION

Postpartum depression has various predisposition factors. These factors consists of internal factor such as breastfeeding problem, history of anxiety and depression, smoking and nutrition. The external factors are stress event and social support.

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