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An Examination of Postpartum Depression and its' Effects on Children

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By Paige Eimen

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EXAMINATION OF POSTPARTUM DEPRESSION

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Abstract

The objective of this paper was to examine the prominent key predictors of postpartum depression (PPD), how mother’s PPD may affect children, and what treatments are most effective in treating PPD. A literature review was used to find relevant information on the topics as well as a systematic review was conducted to review literature related to PPD and child outcomes. In the systematic review, a literature search was conducted and 481 articles from PubMed and 48 articles from PsycINFO were screened using predetermined search terms and inclusion criteria, resulting in only three articles meeting criteria. From the first section, key predictors were determined as prenatal depression, prenatal anxiety, and prenatal stress. The second section results indicated that children may be at risk for having behavioral problems and underdeveloped language. The third section found that antidepressants, interpersonal psychotherapy, and cognitive behavioral therapy are effective treatments to treat PPD. Future directions for this study is to examine social economical status in women for key predictors, examine the father’s PPD on child outcomes, and continue to push screenings on mothers who have PPD.
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An Examination of Postpartum Depression and its’ Effect on Children

Major depression can be defined as a disorder that affects one's mood, neurovegetative functions such as appetite and sleep disturbances; cognition such as inappropriate guilt and feelings of worthlessness; and psychomotor activities such as agitation (Fava & Kendler, 2000). According to the American Psychiatric Association (APA; 2013), postpartum depression (PPD) is defined as depression that occurs during or after the birth of a child. In order to be diagnosed with PPD, postpartum onset needs to begin within four weeks after delivery and signs of depression need to occur (APA, 2013; Wisner, Parry, & Piontek, 2002). Additionally, symptoms of PPD include extreme sadness, difficulty concentrating, and changes in sleep, appetite, and energy (Hall, Kotch, Browne, & Rayens, 1996). Other symptoms may include loss of control, compulsive thoughts, feeling of inadequacy, and an inability to cope (Harowitz & Goodman, 2004).

Maternal blues (MB) are often confused with PPD. MB is characterized by transient mood swings to a low mood and crying that usually occurs within the first few days after delivery, whereas, PPD occurs a few weeks after delivery and lasts for a few weeks or months (Takahashi & Tamakoshi, 2014). Also, to note, another difference between MB and PPD is that the prevalence rate of developing these disorders is higher for MB (32.7%) compared to PPD (15%; Faisal-Cury, Menezes, Tedesco, Kahalle, & Zugaib, 2008).

PPD is found to have negative effects on the health of the mother, the infant, and the entire family (Stewart, Gagnon, Saucier, Wahoush, & Dougherty, 2008). There is an assumption that PPD is only found in women due to an increased risk for depression during and after pregnancy, but men can be found to have PPD symptoms (Goodman, 2004; Parekh, Jarlenski, & Kelly, 2017). Therefore, men can also experience negative health outcomes, reduced social
functioning, physical health problems, reduced family support, and strained marital relationships (Roberts, Bushnell, Collings, & Purdie, 2006).

It can be quite concerning that 15% of women are diagnosed and live with PPD (Pearlstein, Howard, Salisbury, & Zlotnick, 2009). In addition, men whose partners were experiencing PPD had an incidence of paternal depression of 24–50% (Goodman, 2004). Research has also shown that children whose mothers struggle with PPD are four times more likely to have behavioral problems as well as seven times more likely to have depression by the age of 18 (Netsi et al., 2017).

Existing research explores the causes or predictors of PPD and indicates that possible predictors of PPD are lower physical health, higher levels of anxiety, longer cycles of depression, distant relationships with partner, difficulties in social relationships, likelihood to develop addictive behaviors, and an increased risk of suicide (Slomian, Honvo, Emonts, Reginster, & Bruyère, 2019). The purpose of this review is to examine the key predictors of PPD, how mother’s PPD may affect children, and what treatments are most effective in treating PPD.

**Key Predictors**

A meta-analysis containing over 40 studies was conducted to explore some key predictive factors of PPD (Beck, 1996). The results from the study indicated that prenatal depression, childcare stress, life stress, prenatal anxiety, and MB are important predictors of PPD (Beck, 1996). Several other reviews have also identified prenatal depression, anxiety, and prenatal stress as key predictors of PPD (Katon, Russo, & Gavin, 2014; Stewart, Robertson, Dennis, Grace, & Wallington, 2003). Based on the results of these studies, this paper will further examine three specific factors: prenatal depression, prenatal anxiety, and prenatal stress. Each of these
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Predictors will be reviewed to see how these potential risks affect the mother before and after the pregnancy.

Prenatal depression can be defined as depression during pregnancy (Muzik & Borovska, 2010). It should also be clarified that PPD occurs after the baby is born, whereas prenatal depression starts during the pregnancy and before the baby is born. A study has shown that prenatal depression affects at least 13% of women during pregnancy (Muzik & Borovska, 2010). This disorder has similar symptoms to PPD, such as frequent crying, loss of enjoyment in pleasurable activities, and sleep disturbances. A study found that prenatal depression has been shown to be a strong predictor of PPD (Muzik & Borovska, 2010). According to Beck (1996), prenatal depression is a strong predictor of PPD. Beck’s (1996) meta-analysis found that 26 of the studies reviewed showed a positive correlation between prenatal depression and PPD. These findings could encourage screening and intervention efforts to prevent PPD, as the literature suggests that prenatal depression may develop into PPD.

The next key predictor is prenatal anxiety, which can be defined as anxiety the mother experiences during her pregnancy (Misri, Abizadeh, Sanders, & Swift, 2015). Prenatal anxiety can be a previously diagnosed anxiety disorder such as generalized anxiety disorder (GAD) that occurs during pregnancy. Prenatal generalized anxiety disorder has a high prevalence of 8.5%–10.5% during pregnancy and 4.4%–10.8% during postpartum (Misri et al., 2015). Symptoms of this disorder may share commonalities with PPD, such as irritability, difficulty focusing, and restlessness, whereas other symptoms are specific to prenatal anxiety but not to PPD, such as muscle tension and sleep disturbances (Brynes, 2018). In another study, it was found that both prenatal depression and anxiety during the third trimester of pregnancy were significant predictors of three- and six-month postpartum stress and depression (Misri et al., 2010). Misri et
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al. (2010) study found that women who experienced high levels of depression were also likely to experience high levels of anxiety, with concurrent measures of anxiety and depression showing high correlations of 0.85 to 0.90. The literature reviewed confirms that prenatal anxiety may be a predictive factor for PPD.

Furthermore, there are different types of stresses the mother can face during the pregnancy, which include stressful life events, long lasting stress, and pregnancy stress (Yim, Stapleton, Guardino, Han-Holbrook, & Schetter, 2015). Stressful life events refer to negative experiences that the mother faces before, during, or after the pregnancy, such as whether the mother had had serious problems or disagreements with relatives, neighbors, or in-laws, whether anyone close to her had died, or serious legal or financial problems (Carmichael, Shaw, Yang, Abrams, & Lammer, 2007). Long lasting stress can be related to mental health problems or financial problems. Prenatal stress is stress that the mother experiences during her pregnancy, and can be ranked as mild, moderate, or severe (Weinstock, 2008; Yim et al., 2015). Examples of prenatal stress include changes in concerns about the outcome of prenatal screenings, fears about the infant's health and development, and uncertainty about the life changes that will come with motherhood (Yim et al., 2015). Between 8% to 13% of mothers experience prenatal stress during their pregnancy and can face different types of stress (Coussons-Read, 2013). One study identified stress as one of the most consistent factors for PPD, and it had a positive effect size between prenatal stress and PPD (O’Hara, 2000). Another study showed that both psychosocial stress and pregnancy-specific stresses may have marked effects on pregnancy, the mother’s development, and PPD (Coussons-Read, 2013). With this knowledge, prenatal stress can be further researched to help prevent possible stressors in future pregnancies and reduce the frequency of predictors and PPD.
Further directions can investigate some other potential predictors of PPD. Socioeconomic status (SES) and its effect on PPD is one predictor that can be further studied. In the eight studies of Beck's (1996) meta-analysis, it was found that there was a small effect size (.19 to .22) between SES and PPD. Further studies can be conducted to examine whether SES can increase PPD, and how future clinicians can prevent PPD. An additional predictor that can be examined is if the mother had an unwanted or unplanned pregnancy. There is a small relationship (.14 to .17) between unplanned or unwanted pregnancy and PPD (Beck, 2002). This predictor can be studied further to see if these eight studies focused on unwanted pregnancy can be replicated with a larger sample size. In addition, it can be studied how this group compares to a group of mothers who had a planned pregnancy, exploring whether this group shows higher risks of PPD.

**Child Outcomes**

Most of the research conducted on mothers during pregnancy and after birth often look at the connection of postpartum and maternal outcomes, such as PPD’s effect on parenting styles and maternal depression effect on the type of support mothers receive. Much research has focused on maternal outcomes, but there is limited literature on the mother’s child and how the mother’s PPD affects their children. The aim of this study is to investigate potential outcomes the child may develop due to the mother having PPD and see how much of a risk it poses to the child. Therefore, a systematic review was conducted to review literature related to postpartum depression and child outcomes.

**Method**

When conducting the systematic review, it was important to establish the proper criteria before searching through the literature. The first step was to establish the search terms. The main search terms were ‘postpartum depression’ and ‘child outcomes’. ‘Postpartum depression’ was
used to focus on the disorder while ‘child outcomes’ looked at a specific age range to find a correlation between the two. Broad search terms were eliminated, including ‘children’, ‘postpartum’, ‘major depression’ and ‘depression’.

The inclusion criteria for the study included only relevant articles from the last 10 years. Another inclusion criteria factor was language as all articles needed to be in English. Furthermore, only articles that strictly dealt with mother’s PPD were considered. In addition, studies that focused on the father and the child were not included because the focus of this study was on the mother's PPD and the child's outcomes. Lastly, the study specifically focused on child outcomes at three to 12 years old.

To conduct the literature search, two databases were utilized, with the first database being PsycINFO. A basic search was conducted first, making sure all potential articles were in English and published between 2010 to 2020. Through the search, the results provided 48 articles. When conducting the literature search for the second database, PubMed, with the same search terms and inclusion criteria, 481 articles were shown. The review criteria were applied to these articles. Looking at Figure 1, the total number of combined articles started at 529 articles. After an abstract review, 520 were found not to meet the criteria. These articles were discarded due to their focus on the parental figure and the child’s relationship, the lack of emphasis on child outcomes, or the child's age being outside the three-to-12 age range selected for this study. Finally, a full text review was conducted on the remaining nine articles. Figure 1 shows that six out of the nine articles were excluded. These articles were not included due to their study design (systematic review and intervention study) or due to their focus on the infant, the mother's mental health, maternal anxiety, and different age groups. As a result, a total of three articles were included in this study.
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Results

In the following section, the results from the three included studies will be reviewed. The first article consisted of 9,848 participants, 8,287 being children (Netsi et al., 2018). The mean age was 28.5 years due to the inclusion of parents and adolescents. This was a longitudinal study and utilized the Avon Longitudinal Study of Parents and Children (Boyd et al., 2012), started in the United Kingdom. The children in the study were followed up at 3.5-years, 16 years, and 18 years. At age 3.5 the outcomes focused on behavioral problems, at 16 years the outcomes focused on mathematical skills, and at 18 years old the outcomes focused on self-reported depression. However, the current study only focused on the outcomes at 3.5 years old child. The Rutter Total Problem Scale (Elander & Rutter, 1996) was used to measure behavioral problems in the 3.5-year-old children. Findings showed that the children with mothers who had a moderate or high risk of postnatal depression had a higher chance of behavioral problems by three and a half years old compared to mothers who do not have postnatal depression or had a high risk of depression (Netsi et al., 2017). For this specific study, behavioral problems are a substantial risk for children. Three types of PND were studied, starting at minimal, moderate, and serve, with the odds ratios for behavior problems being 1.91, 2.22, and 2.33 for each level, respectively. This means that a child is 2.33 more times likely to have a behavioral problem as a result of their mother's PPD. In addition, when combining the severity of PND and the persistence, or a long occurrence, of having PPD, a child is 4.84 times likely to have behavioral problems.

The second article consisted of 969 neonates and their mothers, and used the Hamamatsu Birth Cohort for Mothers and Children HBC Study (Takagai et al., 2015), a population sample in Japan (Aoyagi, Takei, Nishimura, Nomura, & Tsuchiya, 2019). This study used a longitudinal design to observe whether children of mothers with early- or late-onset PPD have a lower or
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higher expressive language score during early childhood (Aoyagi et al., 2019). The study had six different age intervals: 10, 14, 18, 24, 32, and 40 months postpartum. However, this study only investigated outcomes at 40-months. It was found that mothers with PPD had children who had a harder time expressing language at 40 months old (Aoyagi et al., 2019). Specifically, children whose mother has PPD compared to children whose mom did not have PPD had expressive language scores 0.6 standard deviations below their peers, meaning that children had lower levels of expressive language development. Implications from this study showed that infants exposed to late term maternal PPD showed a significant slower development pattern in their expressive language abilities, and that this should be further researched (Aoyagi et al., 2019).

The third article consisted of 10,893 mother-child dyad pairs, with the children being ranked in three categories: children of women with diagnosed depression who are receiving treatment; children of women who show signs of psychological distress based on self-report assessments but are not receiving any treatment; and children of women who are not being treated for depression and appear to have few or no symptoms of psychological distress nine months after birth (Bell, Bloor, & Hewitt, 2019). The data came from the Millennium Cohort Study (Plewis, Calderwood, Hawkes, Hughes, & Joshi, 2004), which used two different methodologies: a questionnaire and an assessment exploring whether the mother fit into the specific category of having depression or not. This study followed the children over time, examining them at 3, 5, and 7 years old. Results from the 25-item Strength and Difficulties Questionnaire (SDQ) (Goodman, 1997) indicated that if mothers had PPD and were not seeking treatment, their children had a higher chance of having behavioral problems at ages three, five, and seven (Bell et al., 2019; Goodman, 1997). According to the results, it was found that children of mothers who were non-depressed and distressed had an increased effect size in
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behavioral problems, ranging from 2.1 to 3.17, compared to children of mothers who are diagnosed and depressed with an effect size ranging from 1.00 to 1.37. This implies children of mothers who are non-depressed and distressed are two to three times more likely to have behavioral problems than children of mothers who are not depressed but not distressed.

In Bell and colleagues (2019) examined language development. The article investigated if children would have poorer language development if their mother had PPD. When examining the effect sizes, the scores at ages three, five, and seven were not significant, meaning that children did not differ in terms of language development mothers who did not have PPD. Further investigations should be included to help monitor and reduce behavioral problems and increase language skills (if needed). The main implication of this study is that symptoms of psychological distress are enough to have long lasting detrimental effects on children’s behavioral development (Bell et al., 2019).

Based on the three articles that met the criteria for this study, it can be determined that two cases focused on behavioral development and two studies focused on language development. The findings from these studies suggest that if mothers have PPD, their children are at risk for having behavioral problems and potentially underdeveloped expressive language skills.

Discussion

The aim of this study was to explore the possible outcomes of maternal PPD on child outcomes from ages three to twelve. The systematic review indicates that children may be at risk for having behavioral problems and underdeveloped language. This is an important topic as not only mothers can be affected by PPD, but it can influence their children. All three articles included in the systematic review involved preschool students; therefore, the participants from the three studies did not show much variation in age. Table 1 shows that the ages of the children
only ranged from three to seven, and no other ages within the included age range of 3-12 were reported. This age group was purposefully included in the article selection criteria. A common theme drawn from this review is that there is research on children three and younger, but there is limited research conducted on children over the age of three. This inclusion criteria may be considered one of the limitations of conducting this systematic review. More databases should be searched if this study is to be replicated in hopes that other researchers produce results with a more diverse age range.

Outcomes varied as well throughout the articles. The main outcome identified in the three articles referred to behavioral problems and language development in children whose mothers have PPD as potential risk factors. Other risk factors and possible outcomes should be determined in future research, such as emotional development and academic knowledge.

The articles reviewed consisted of longitudinal studies with large sample sizes. A longitudinal study is a study that requires a period of observation of the same topic continuously over a long or short period of time (Caruana, Roman, Hernández-Sánchez, & Solli, 2015). In this review, two out of the three studies started their data collection when the participants were babies, and they continued until the participants were three or four years of age. The use of longitudinal design was a strength of the articles selected for inclusion in this study.

Overall, these studies help bring awareness of the effects that mothers with PPD may have on their children. This knowledge provides a pathway to reduce the risk for behavioral and language problems in these children so hopefully by the time these children start kindergarten, the risk of having one of these outcomes can be decreased. Furthermore, there seems to be limited research of potential risks for children aged eight to 12 years old. Thus, future research needs to be conducted on children from ages eight to 12 to further investigate other potential risk
Factors for children of mothers with PPD. In addition, PPD can also be investigated further by considering the father's PPD. For this study, the father was omitted from the results, but if the father were included, what other potential risk factors would the study have found? Would the same risk factors appear, just like from the mother? Or would a whole new set of risk factors appear from the father? That is a research area that would need to be further examined.

**Approaches for Treating Postpartum Depression**

After understanding some potential key predictors of PPD, as well as seeing how a mother’s PPD may affect a child and the importance of treatment, this paper will now address possible preventions and interventions for the mother struggling with PPD. Types of therapies and antidepressant drugs will be described in this section to see the level of effectiveness in treating mother’s PPD with the treatments mentioned above.

O’Hara, Stuart, and Gorman (2000) found that women who did not receive treatment for their postpartum PPD can be in a great amount of pain mentally and may have been at risk for developing an insecure attachment with their infant. In addition, women can face negative consequences such as impaired functioning, worsening symptoms, treatment resistance, and suicide (Sit & Wisner, 2009). If women do not seek treatment, they also run the risk of developing postpartum psychosis, a disorder the mother may develop including paranoid or bizarre delusions, potential fluctuations in mood, and confused thinking and behavior (Sit, Rothschild, & Wisner, 2006). It is critical that women who are diagnosed with PPD receive treatment as soon as possible.

One of the more well-known treatments for PPD is the use of antidepressants. A well-known drug called fluoxetine, or Prozac, is used to treat PPD and other disorders. Fluoxetine is a serotonin specific reuptake inhibitor (SSRI) that helps balance chemicals in the brain (Sit &
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Wisner, 2009; Durbin, 2018). Appleby et al.’s (1997) study on fluoxetine and its effects on PPD had three main aims: to see whether the drug fluoxetine was more effective than a placebo drug; to examine whether six counseling sessions were better than one session; and to observe whether fluoxetine and six additional sessions of counselling would be equally effective as one counseling session on mother’s PPD. The results of this study indicated that women who had a combination of fluoxetine and one counseling session had reduced symptoms of PPD. In addition, women who attended six sessions of counseling and took fluoxetine did not have any additional improvement compared to one session of counseling and taking medication (Appleby et al., 1997). This study showed that there is strong evidence that attending a counseling session and taking fluoxetine can help treat women with PPD.

Additionally, Cohen et al. (2001) studied whether venlafaxine was a potential treatment for PPD. Venlafaxine is another SSRI that is used to balance chemicals in the brain for major depression disorder, panic disorder, and anxiety disorders (Entringer, 2019). The results indicated that twelve out of the fifteen participants in the study were no longer showing symptoms of depression following the treatment (Cohen et al., 2001). This study showed that taking antidepressants is one of the main interventions that can help mother’s symptoms of PPD.

Another well-known treatment for PPD is psychotherapy. Psychotherapy, or more commonly referred to as ‘counseling’ or ‘therapy,’ involves the diagnosis and treatment of mental health disorders by consulting with a mental health professional. There are specific types of psychotherapy, such as interpersonal, cognitive, behavioral, or humanistic psychotherapy. However, this literature review is specifically looking at interpersonal and cognitive-behavioral psychotherapy as treatment methods for PPD. The first therapy that will be covered in this review will be interpersonal psychotherapy. Interpersonal psychotherapy is defined as a time-
limited, focused, evidence-based approach to treat mood disorders, as well as this therapy aims to improve the quality of a client’s interpersonal relationships and social functioning to help reduce their distress (APA, 2013).

O’Hara et al., (2000) examined how the efficacy of interpersonal psychotherapy affected mothers who have PPD. In their study, 120 women met the criteria of having PPD and were randomly assigned to receive interpersonal therapy (IPT). The study broke the 120 mothers into two groups: 60 women received 12 weeks of IPT, and the other 60 women had to wait twelve weeks to receive treatment. The therapy focused on the interpersonal difficulties identified by the patient, with common problem areas including conflict with partner or extended family, loss of social/work relationships and losses associated with birth, previous perinatal loss, and the death of significant others (O’Hara et al., 2000). During the last session, the therapist reinforced the patient’s sense of competence in overcoming depression, discussed their plans for termination of therapy, and worked with the patient to develop plans if their depression reoccurred. The mothers with PPD either received 12 weeks of interpersonal therapy or were put on a waitlist. The results from this study indicated that the participants who received the 12-week interpersonal psychotherapy sessions had fewer symptoms of PPD when assessing their symptoms on the Beck Depression Inventory and the Hamilton Scale for Depression. Findings showed that interpersonal psychotherapy was effective at reducing depressive symptoms and improved social relationships (O’Hara et al., 2002).

Zlotnick et al.’s (2001) study explored the effects of an intervention for pregnant mothers to attend interpersonal psychotherapy before the baby was born. In this study, 37 women who were at-risk for PPD were broken into two groups, one group received four intervention sessions of counseling before they gave birth (intervention group), and the other group received treatment
as usual (control group). The results of this study showed that the six women who were in the control group developed PPD after giving birth, compared to the intervention group who had no women develop PPD after giving birth. This study suggested that interpersonal psychotherapy was effective in preventing depression in mothers during pregnancy, as well as preventing PPD after the baby is born (Zlotnick et al., 2001). The literature review provides evidence for the use of interpersonal psychotherapy as an effective intervention for PPD.

Another therapy that can help treat PPD is cognitive behavioral therapy (CBT). CBT is defined as therapy that can help individuals correct their unhelpful thinking, undo learned patterns of unhelpful behavior, and learn better ways of coping with PPD (APA, 2013). In addition, CBT is used for individuals struggling with depression, anxiety, post-traumatic stress disorder, eating disorders, and other mental health disorders (APA, 2013). Lieshout, Yang, Harber, and Ferro (2016) examined whether CBT was an effective treatment for PPD. The study had 36 participants involved, with half being involved in a CBT group and the other half receiving psychoeducation and guided discussions on PPD (Lieshout et al., 2016). The Edinburgh Postpartum Depression Scale (EPDS) and the Beck's Depression Inventory (BDI) were used to measure mother’s level of PPD before and after the intervention. The results of the study indicated that mothers who were in the CBT intervention had lower depression symptoms, an effect size of 1.97 was found when using the EPDS whereas an effect size of 1.87 was found using the BDI. This study suggests that CBT is another option to treat mothers with PPD.

With some interventions identified for PPD, researchers can investigate how PPD can be prevented. Based on evidence from Sit and Wisner’s (2009) study, doctors advise that it is important to start screening for depression once the mother is pregnant. Sit and Wisner (2009) study suggested that the best time to screen mothers is when they go for their first obstetric visit.
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The authors also suggest that mothers can be screened by using Edinburgh Postnatal Depression Scale (EPDS; Cox, Holden, & Sagovsky, 1987). If the mother received a score higher than 13 on the EPDS, mothers were at risk for postpartum depression (Sit & Wisner, 2009). In addition, mothers should be screened again for PPD a month after giving birth (Sit & Wisner, 2009). Doctors at this time can help decrease the risks of mothers developing PPD by providing resources such as therapy and attending support groups, as well as starting to screen for PPD at the mother’s first obstetric appointment (Sit & Wisner, 2009).

Another way to prevent PPD is to provide therapy for individuals at risk. This idea is determined by Zlotnick et al. 's (2001) study, which focused on prevention of PPD before the mothers give birth. This study had 17 mothers attend 4 sessions of interpersonal psychotherapy if they were at risk for severe depression or PPD. In that study, the 17 mothers who attended the sessions of counseling did not develop PPD. While six out of the 18 mothers who did not attend the sessions developed PPD.

Conclusion

PPD is a prevalent issue in today’s world, affecting up to 15% of mothers worldwide. The literature indicates that prenatal depression, prenatal anxiety, and prenatal stress were found to be key predictors of PPD. This systematic review found that in addition to negative effects mothers experience with PPD, children can also experience negative effects such as behavioral and language problems. Also, antidepressants, interpersonal psychotherapy and cognitive behavioral therapy can help treat mothers with PPD. Additionally, early screenings were found to aid in the prevention of PPD. Therefore, researchers should be urged to continue screening mothers at their first obstetric appointment as a prevention measure for PPD and prenatal depression.
### Table 1

**Summary of Included Articles**

<table>
<thead>
<tr>
<th>Author</th>
<th>Age</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netsi, Pearson, Murray, Cooper, Craske, and Stein, 2017</td>
<td>3.5 Years</td>
<td>Children were 4.84 more times likely of developing behavioral problems at three and a half years of age compared to children whose mother do not have PPD.</td>
</tr>
<tr>
<td>Aoyagi, Takei, Nishimura, Nomura, Tsuchiya, 2019</td>
<td>3.5 Years</td>
<td>Maternal PPD was associated with poorer expressive language skills (.6 standard deviation lower) in children.</td>
</tr>
<tr>
<td>Bell, Bloor, &amp; Heweitt, 2019</td>
<td>3, 5, and 7 Years</td>
<td>Children were 2.1 to 3.17 times more likely to have behavioral problems if the mother had postpartum depression. No significance was found between mother’s PPD and expressive language development.</td>
</tr>
</tbody>
</table>
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Figure 1

Review of Inclusion Criteria

- Literature searched on PsycInfo: 48 references identified
- Literature searched on PubMed: 481 references identified
- Abstracts screened: N=529
  - Abstracts ineligible: N=520
  - Full text articles screened: N=9
    - Full text articles excluded, with reason: N=6
- Articles included for study: N=3
References


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Scales. *International Journal of Methods in Psychiatric Research, 6*(2), 63–78. doi: 10.1002/(sici)1234-988x(199607)6:2<63::aid-mpr151>3.3.co;2-m


depression symptoms. *Research and Theory for Nursing Practice, 18*(2), 149–163. doi: 10.1891/rtnp.18.2.149.61285


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psychotherapy for postpartum depression. *Archives of General Psychiatry*, 57(11), 1039. doi: 10.1001/archpsyc.57.11.1039


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10.1176/appi.ajp.158.4.638
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Point Value</th>
<th>Due Date</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Paper: Description of key predictors of Post-Partum Depression</strong></td>
<td>50/50</td>
<td>2/4</td>
<td>Revision turned in on 2/23</td>
</tr>
<tr>
<td>- This section should include a thorough description of Post-Partum Depression.</td>
<td></td>
<td>Revision due by 2/18</td>
<td>Revision turned in on 2/23, Revision turned in on 3/11, This section has come together nicely.</td>
</tr>
<tr>
<td>- The definition should align with up-to-date conceptualizations.</td>
<td></td>
<td></td>
<td>You did a great job revising based on the feedback and really working to make your writing clear and accurate. Well done.</td>
</tr>
<tr>
<td>- This research from a minimum of 5 empirical articles and book chapters will be included in this section.</td>
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<tr>
<td>- Approximately 5 pages</td>
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<tr>
<td><strong>Paper: Systematic Review of Child Outcomes of Post-Partum Depression</strong></td>
<td>95/100</td>
<td>Questions and outline of methods due 2/11</td>
<td>Flow chart turned in on 3/11</td>
</tr>
<tr>
<td>- Research question outlined.</td>
<td></td>
<td>Search summary due 2/25</td>
<td>You did a really good job revising your description of your results following feedback. It is important to be able to succinctly and accurately describe study results and I think you are there.</td>
</tr>
<tr>
<td>- Outline of methods to conduct systematic review (search terms, pre-specified search strategy, databases searched)</td>
<td></td>
<td>Full section due 3/10</td>
<td>You also did a lot of work reviewing a huge number of studies—well done.</td>
</tr>
<tr>
<td>- Presentation of results of literature search in organized and thorough way.</td>
<td></td>
<td>Revisions due 3/24</td>
<td>My main comments in this section were just for additional clarity.</td>
</tr>
<tr>
<td>- Conclusions and implications for the research are stated.</td>
<td></td>
<td></td>
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<tr>
<td>- Approximately 7-10 pages</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Paper: Description of Best Practice Approaches for Treating Post-Partum Depression</strong></td>
<td>50/50</td>
<td>4/7</td>
<td>This section came together really nicely. It provided a good overview of the approaches that can be used and is well-written.</td>
</tr>
<tr>
<td>- Revision by 4/21</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
EXAMINATION OF POSTPARTUM DEPRESSION

- Description of best practices should include both prevention and intervention approaches (where applicable). Summarized/described at least five empirical studies that reported the efficacy/outcomes/results of the intervention program or approach.
- Approximately 5 pages.

<table>
<thead>
<tr>
<th>Paper: Quality of writing</th>
<th>23/25</th>
<th>Your work at continuing to revise and address feedback really shows. Continue to work on typos and small editorial issues.</th>
</tr>
</thead>
<tbody>
<tr>
<td>- APA style</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- No spelling and grammar errors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Organization and flow</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Paper: Reference</th>
<th>20/25</th>
<th>Nice job compiling a long reference list. This takes a lot of work. The next step is to refine the details, like capitalization (journals all words capitalized, while titles only the first word is capitalized).</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Complete and accurate reference list.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Reference list should be compiled for each section as we go.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- APA style.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL** 238/250 Well done, Paige!