

# Therapeutic approaches in the treatment of postpartum depression – contemporary views

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## Abstract

Postpartum depression (PPD) is one of the most common complications of the postpartum period. This prevalent woman's mental health problem is a serious threat to the psychological and physical well-being of both mothers and infants, and its consequences may persist in the long term. Because of the unique changes at the biological, psychological, and social levels that result from childbirth and early adaptation to motherhood, treatment of postpartum depression requires a specific approach. Although many systematic reviews describing therapeutic interventions for the treatment of PPD have appeared in the literature in recent years, the most effective therapeutic options have still not been identified. This paper reviews current treatment recommendations for postpartum depression, with consideration of their effectiveness and safety. The authors also formulate practical guidelines in the therapeutic management of postpartum depression, paying attention to the course and character of accompanying symptoms.

**postpartum depression; treatment; pharmacotherapy; psychotherapy; women's mental health**

## INTRODUCTION

One of the most commonly observed complications of the perinatal period are psychiatric disorders. Depressive symptoms in the perinatal period range from maternity blues (commonly seen in the postpartum period) to major depressive disorder (MDD) and postpartum psychosis. Postpartum depression (PPD) is estimated to affect between 9% and 16% of postpartum women, with an increased risk noted for up to one year after delivery [1, 2]. Symptoms differ for everyone, and may include: feelings of sadness, hopelessness, anger, fear and/or guilt, loss of interest or pleasure in daily activities, lack of

interest in the baby, appetite and sleep disturbance, somatic complaints, inadequate prenatal care, decision-making problems, impaired attention, and possible thoughts of harming the baby or oneself. While the biological factors influencing mood early in the postpartum period may be less relevant later, the first year after delivery is replete with many unique psychosocial stressors [3]. Postpartum depression carries the risk of serious, long-term consequences for mothers, children and entire families. Maternal PPD is associated with poor quality of life, overall worse health status, difficulties in social relationships, increased incidence of risky behaviors such as cigarette, alcohol, and other substance use, higher prevalence of suicidal ideations. PPD also affects child welfare by contributing to neonatal complications (low birth weight, preterm birth, small for gestational age), poor infant attachment, poor quality mother-child interactions,

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early childhood cognitive, emotional, motor and neural functioning developmental delays, and relationship strain [4-7].

### **Current treatment guidelines for postpartum depression**

PPD is a significant mental and public health problem and may be one of the most disabling disorders among women of childbearing age and coping with this syndrome in healthcare systems worldwide has been so far more or less insufficient and a few areas in the field need particular attention. First and foremost, there is a huge need of implementing new prevention and treatment options for patients with PND as it can be fatal for mothers and lack of treatment of maternal depression may actually be the most harmful effect for infants [5].

In accordance with current treatment guidelines, psychotherapy is the recommended form of treatment for mild to moderate depressive episode, whereas antidepressant medication is the first-choice for severe depression.

Available data provide an opportunity to determine the safety and efficacy of pharmacotherapy in the treatment of PPD. Generally, guidelines recommend continuation of antidepressant medication which was successfully applied during pregnancy and encourage breastfeeding regardless of the type of antidepressants used [8-10].

To determine the safety of a drug in a breastfeeding woman, it is useful to establish one parameter, i.e. the relative infant dose (RID). RID defines the ratio of the active substance the infant receives with the mother's milk as compared to the dose the mother takes per kilogram body weight. A medication is assumed to be safe if RID is <10% [11]. A procedure aimed at protection of lactation is recommended by the Polish Psychiatric Association [8].

Most often chosen medications are SSRIs, especially sertraline and paroxetine. SNRIs have safety profiles for both a woman and a baby similar to that of SSRIs. TCAs are reported generally safe, except for doxepin since cases of serious side effects in children (respiratory depression and sedation) have been observed. Data on safety of mianserin, mirtazapine, trazodone and bupropion are limited [12].

Brexanolone, a soluble, proprietary, injectable formulation of allopregnanolone, has a novel mechanism of action and appears to be safe and effective for the treatment of moderate to severe postpartum depression. However, high cost, serious adverse effects, and restricted access may limit its use in clinical practice [13].

To sum up, antidepressants as a class of psychotropic medications are safe during lactation, their levels in blood of breastfed children are low or undetectable, and side effects are rare. Sertraline is an antidepressant of choice, then paroxetine, duloxetine or trazodone. The only one from that class contraindicated during lactation is doxepine [8,11,14-16].

If anxiety is an issue, hydroxyzine may be used as an adjunct therapy after delivery. The same applies to quetiapine which transfers into milk in an extremely low amount; additionally, it is regarded a safe option in antepartum depression with psychosis or severe anxiety. Benzodiazepines (BZD) reach low plasma concentration in infants breastfed by mothers who take these drugs. The drugs of choice are lorazepam and oxazepam. However, due to the risk of respiratory depression and abstinence syndrome in breastfed infants, they should be used as short as possible and in case of co-sleeping they should not be used at all [8,11,14-16]. It is important to remember that taking care after an infant and a little child being under the influence of sedative medications may be a serious issue.

Currently, several psychotherapeutic approaches have shown good efficacy in the treatment of postpartum depression.

Cognitive behavioral therapy has been widely used, empirically supported treatment for postpartum depression. A fundamental therapeutic strategy is a cognitive restructuring, that has been proven to improve cognitive control regions [17]. Other useful interventions that contribute to the CBT's efficacy include: behavioral activation and enhancing pleasurable activities, problem solving methods, communication strategies, cognitive – behavioral competencies relevant for the adaptation of mothers. [18, 19, 20, 21, 22]. Meta-analyses consistently indicate the effectiveness of cognitive-behavioral therapy in alleviating the course of postpartum depression. A significant to moderate size-effect

of CBT intervention on the reduction of PPD symptoms, measured in the short term, was independently demonstrated  $d = -0.54$ , 95% CI,  $-0.716; -0.423$  [23], RR: 0.70, 95% C.I, 0.55 to 0.90 [24]. Online cognitive behavioral therapy is also receiving promising results. Meta-analytic study identified a moderate significant size-effect ( $d = -0.54$ , 95% CI  $[-0.716; -0.423]$ ) of the OCBTs in reducing PPD [25]. Unfortunately, these encouraging results relate only to the early postpartum period (<4 months). The long-term effect of cognitive behavioral therapy (both standard and online protocols) on maternal welfare remains unclear. This may be twofold. First, it may be due to the difficulty of consolidating changes long after the end of therapy. Second, there is a lack of good quality longitudinal studies testing the persistence of results over the long term.

Another psychological intervention addressed to women in the postpartum period is interpersonal psychotherapy (IPT). Interpersonal therapy assumes that adaptability to challenging life situations, is significantly moderated by factors such as attachment styles, communication patterns and the nature of social support networks [26]. Interventions are therefore tailored to the difficulties associated with the postpartum period. These include: the lack of social support or its mismatch with the woman's needs, adaptation to motherhood and changes in previous social roles, coping with changes such as loss of independent identity, loss of professional position, decreased closeness in an intimate relationship [27]. As a result, IPT has the potential to alleviate the symptoms of postpartum depression, what makes this intervention, alongside CBT, the first-choice non-pharmacological treatment mode. Two RCTs examining the efficacy of IPT during the postpartum period, shows

that women who have engaged in IPT, reported a significant improvement in depressive symptoms and had a better chance of recovery from depression as compared to women in the control conditions [27, 28]. However, the effectiveness of interpersonal therapy for low income and/or minority women has not been consistently validated. Research teams have independently obtained discrepant results. Two RCT's conducted by Spinelli and colleagues have also demonstrated this inconsistency. While their pilot RCT found significant group differences in reduction of depressive symptoms, favoring the IPT group, the larger RCT failed to confirm those results [29, 30].

It is worth noting that attempts have also been made to create a multidimensional model of support for women in the perinatal period. Grote and colleagues (2015) complemented intensive obstetric care (i.e. parenting classes, lactation support) with psychotherapeutic (ITP brief) and psychiatric support (antidepressants if needed). Although both women in the control group (receiving obstetric support) and those receiving collaborative care intervention experienced improvements in psychological well-being, mothers in the intervention group reported significantly fewer depressive symptoms at 18 months post-intervention and were more likely to maintain remission (48% vs. 29%) as compared to the control group [31].

Interestingly, there are other forms of talk therapies, such as peer support, social problem solving or reflective listening visits that reveal preliminary evidence suggesting their positive effects on postpartum women's mental health [32-34]. Nevertheless, further research, especially randomized controlled trials, are needed to judge their usefulness in the treatment of postpartum depression.

**Table 1.** Proposed general rules to deal with postpartum depression in a psychiatric office

Mild to Moderate Postpartum Depression	Moderate to Severe/Suicidal Postpartum Depression
To start with non-pharmacologic interventions: Cognitive behavioral therapy (CBT) (individual or group) Interpersonal psychotherapy (IPT) (individual or group)	To combine pharmacological treatment and psychotherapy: SSRI /an antidepressant medication applied with success during pregnancy plus CBT/IPT
To weight a benefit/risk ratio of pharmacotherapy at the individual level	To evaluate suicidal or homicidal ideation and connected risk factors

<p>To use a well-known drug, in monotherapy, at the lowest effective dose, with RID &lt; 10%:          First line: Sertraline, paroxetine          Second line: citalopram, escitalopram fluoxetine, fluvoxamine, duloxetine</p>	<p>To consider electroconvulsive therapy (ECT) or repetitive transcranial magnetic stimulation (TMS) in the case of treatment-resistant or suicidal patients</p>
<p>To encourage other non-pharmacological strategies such as structured exercise, yoga, acupuncture, aromatherapy, bright light therapy etc.</p>	
<p>To engage family support and/or suggest use of a doula or nurse (if finances allow)</p>	
<p>To encourage breastfeeding</p>	
<p>To assess an infant regularly by a pediatrician</p>	

While there is solid evidence on the effectiveness of psychological interventions in treating postnatal depression, women continue to report the presence of barriers to seeking support during this critical period. Previous obstacles such as social stigma, uncertainty about individual perception of motherhood, reluctance to pharmacotherapy, attempts to self-manage first, challenges related to early childcare, poor social support have now been reinforced by the pandemic situation and its associated restrictions. In order to meet the described limitations, online-based interventions become a worthwhile alternative or addition to standard treatment protocols for postpartum depression. There are an increasing number of reports verifying the effectiveness of various therapeutic approaches aimed at women in the postpartum period. Again, cognitive behavioral therapy and interpersonal therapy have the most data supporting their effectiveness in an online setting. An online CBT intervention for postpartum women demonstrated promising effects on depressive symptoms reduction at post-treatment as compared to women in the treatment as usual group or in the wait list control condition [35]. A recent meta-analytic study also found a moderate significant size-effect of the OCBTs in reducing PD [25]. Similar results in reducing depressive symptoms have been shown for online interventions in an interpersonal approach [36].

Due to the fact that women in the postpartum period are still overwhelmingly reluctant to undertake pharmacological treatment complementary treatments are also noteworthy. It is worth mentioning that different non-pharmacologic biological therapies may be implemented concurrently with psychotherapy in the treatment

of PPD. Among them diet or pre- and probiotics. E.g. in a study by Slykerman pregnant women consuming the probiotic had statistically significant reduction in the severity of depressive and anxiety symptoms and lower rate of postpartum depression compared to subjects taking placebo [37]. Other strategies such as peer support, exercise, yoga, aromatherapy, acupuncture that have shown promise as an effective intervention in women with PPD should also be considered [38,39,40,41,42]. However, the effectiveness of these interventions has not yet been decisively established. To sum up, some general rules to deal with a postpartum depression are proposed in tab. I.

## CONCLUSION

In conclusion, it should be remembered that the postpartum period is a crucial time in a woman's life when the risk of developing mental disorders increases significantly. It is characterized not only by the presence of dynamic changes in body weight, fluid retention, nutritional demands and hormones, but also by the need to adapt to demanding changes in life roles. Considering the above, treatment of postpartum depression requires different treatment regimens than for MDD. Untreated postpartum depression constitutes a serious health risks to the mother and a child. Although many systematic reviews describing therapeutic interventions for the treatment of PPD have appeared in the literature in recent years, the most effective therapeutic options have still not been identified. However, the available data provide an opportunity to formulate therapeutic strategies that

should be carefully tailored to the individual's course of the disease. Prevention and early intervention of perinatal disorders should be an important goal of practitioners, involving multidisciplinary collaboration.

**The Author Contribution:**

*Study Design:* K. S., O.G-K., *Data Collection:* K. S., O.G-K., *Data Interpretation:* K. S., O.G-K., *Manuscript Preparation:* K. S., D.S., O.G-K., *Literature Search:* K.S., O. G-K., *Funds Collection:* D.S.

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