

## Efficacy of the Biopsychosocial Model in Managing the Symptoms of Postpartum Depression in Women

Kusum Sharma<sup>1\*</sup>

### ABSTRACT

Postpartum Depression is one of the most common as well as underdiagnosed mental health conditions in women. It generally develops within the first week just after childbirth. Symptoms like sleepless nights, irritability, severe mood swings, sadness, and loss of appetite could be signs of postpartum depression if they persist for more than one week. Biopsychological model is a trans-disciplinary approach that attempts to resolve the major maternal mental health issue by combining the three domains of Biology, Psychology, and social. **Aim of the study:** The present study aims to develop a Biopsychosocial Model for the management of Postpartum Depression symptoms, also investigates the associated risk factors causing Postpartum Depression in women. **Methods and construct:** The study is theoretical. The model developed in the study is based on previous research and studies. Only secondary data has been used to collect information from different sources and studies to draw conclusions. **Findings of the study:** Findings of the study suggest that the Biopsychosocial model is an amalgamation of three domains, Biological, Social, and Psychological models, and could be very helpful in planning an individualized treatment plan for women, keeping in mind their different needs. However, the practical applicability of this model is still an argument for researchers but if implemented and used correctly by clinicians, it could prove helpful not just for studying the associated risk factors but also provide a more comprehensive plan to alleviate the sufferings of women with postpartum depression.

**Keywords:** *Biopsychosocial Model, Postpartum Depression*

Depression comes from the Latin word "depression" (Bernard, 2018). It is a common mental disorder manifested by depressed mood, loss of interest or pleasure, decreased energy, feelings of guilt, low self-esteem, insomnia or hypersomnia, psychomotor agitation or slowing, loss of appetite, lack of concentration, forgetfulness, crying (Depression Guideline Update, 2011). The prevalence of Postpartum Depression in women is estimated to range from 10 to 30%. In India, about 22% of mothers suffer from postpartum depression. It is the most common and underdiagnosed form of depression, which is still striving for its definition. In the context of the mental health of women in the Postpartum period, in which no single model that is feasible. Biopsychological model are class of trans-disciplinary models which are combinations of biology (genetics, physical health, drugs, deficiencies), psychology (Emotional stability, self esteem) and social (social

<sup>1</sup>Ph.D Psychology research scholar, School of Liberal Arts and Management, DIT University, Dehradun

\*Corresponding Author

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support marital life family type religion by family and friends social stigma, assistance provided by health care workers in community) factors in managing depression in postpartum mothers.

Postpartum is the phase of life that all mothers go through after the birth of a child. It is a transitional period with a lot of physical and mental changes occurring. The journey of motherhood is beautiful and remarkable. But, for some mothers, it's a roller coaster ride. Mothers face lots of stress, anxiety, and mood swings, generally known as postpartum blues. But when the symptoms of low mood and feelings of sadness continue for at least more than a month, it certainly develops the mental condition which is known as postpartum depression. Many studies have been done to investigate the condition and risk factors associated with postpartum depression. Any mental issue with postpartum mothers affects the healing process after delivery and also has a significant effect on the development of the infant. Mothers' mental health plays a key role in the growth and development of babies physically as well as mentally.

Previous studies suggest that sudden changes in the level of hormones and obstetric conditions before and after delivery are the main causes behind the development of postpartum depression. On the other hand, some researchers suggest that many more factors could be associated with the development of the condition. the present study is focused on investigating postpartum depression and risk factors from the lens of the biopsychosocial model.

### ***Aim of the study***

1. The present study aims to develop a biopsychosocial model for the management of Postpartum depression.
2. It also focuses on investigating the associated risk factors that cause postpartum depression in women through the lens of the biopsychosocial model.
3. Development of an individualised treatment plan for women with symptoms of postpartum depression.

### **Symptoms of Postpartum Depression, as per DSM-5**

Depression symptoms, including

- Persistent Sadness
- Lack Of Interest
- Low Self-Esteem
- Sleep Disturbances, and Loss of Appetite
- Anxiety and irritability with a hostile attitude towards infants
- Self-blame, and feelings of humiliation
- Self-harming and suicidal thoughts.
- Difficulty bonding with the baby, and feelings of hopelessness or worthlessness.

Recognizing and addressing PPD is crucial for the health and well-being of the patient and their baby. If left untreated, PPD can interfere with the ability to care for the child and may contribute to long-term developmental issues in the child (e.g., emotional and behavioral problems). PPD can also strain family relationships and increase the risk of suicide.

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### ***Prevalence of postpartum depression***

1. The global prevalence of new mothers developing postpartum depression ranges from 10-20% (Josefsson et al., 2002; Evagorou et al., 2016). The experience of postpartum depression is observed to be common in India.
2. As documented in recent studies, the prevalence in the country ranges from 19.8 to 23.3% (Benjamin et al., 2005; Chandran et al., 2002; Shriram et al., 2019; Agarwala et al., 2019).
3. As per the WHO bulletin published in 2017, included results from a systematic review and meta-analysis of studies conducted in India from 2000 to 2016 showed that the overall pooled estimate of the prevalence of postpartum depression in India was 22%.

In the context of the mental health of women in the postpartum period, no single model is feasible. The biopsychosocial model is a class of transdisciplinary models that are combinations of biology (genetics, physical health, drugs, deficiencies), psychology (Emotional stability, self-esteem), and social aspects (social support, marital life, family type, religion by family and friends, and social stigma). The assistance provided by health care workers in the community also counts in postnatal care and is considered as a significant aspect.

### ***History of the Biopsychosocial Model***

The term “biopsychosocial” was first coined by Roy Grinker in 1952. Further Engel expanded upon the model in 1977. It was first used by Dr. George Engel and Dr John Romano to study mental health through a multi-system lens. Postpartum depression is better understood when it is examined from the lens of BPS. Genetics and physical wellbeing is not only the main cause of developing postpartum but other factors like social and psychological should be considered while investigating and managing.

### ***Tenets of the Biopsychosocial Model***

George Engel proposed a new model for medicine, the biopsychosocial model, contrasted with the existing biomedical model (Engel, 1977). While recognizing the great advances in biomedicine, Engel argued that nevertheless the biomedical model was limited, and insufficient for many aspects of medical science and healthcare. “Biology” refers to our genetics physical health, and the functioning of our organ systems. Our physical well-being impacts our mental health for multiple reasons. First, our brain is an organ and can become unwell just like any other organ. Second, physical health conditions can affect mental health. For example, chronic pain can lead to symptoms of depression.

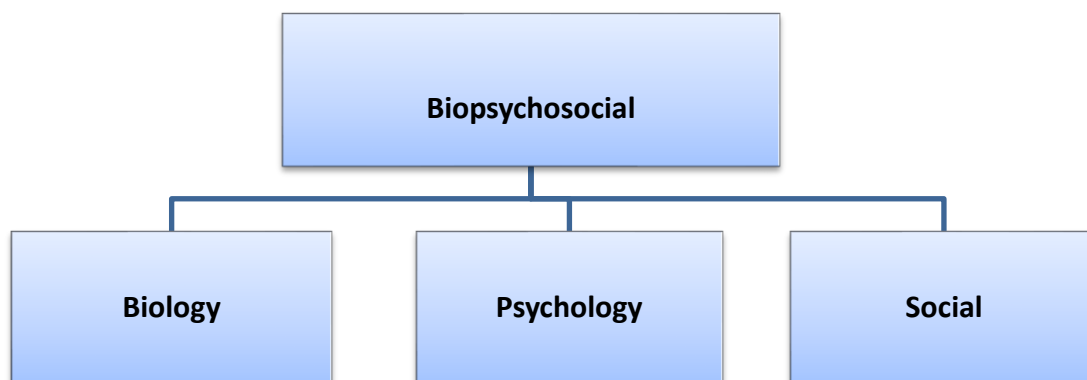
The dominant health models today are biomedical, leaving no room within their framework for illness's social, psychological, and behavioral dimensions. A proposed biopsychosocial model provides a blueprint for research, a framework for teaching, and a design for action in the real world of health care. The most important feature of this model is that it is interdisciplinary. In contrast to other medical models which focussed only on the physiology of postpartum depression, the BPS model helps specify the associated risk factors of postpartum depression, which are related to biological grounds like genetics, physical health of mothers, past illnesses, treatment, and lack of some vitamins and minerals like vitamin D, iron, omega-3 fatty acids, etc. On the other hand, psychological factors like mental health, emotional intelligence level, stress, anxiety and mood disorders, and self-image-related issues. Social factors include social support from friends and spouse, relationships with

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significant others, and availability of maternal health facilities in the community before and after delivery of the baby.

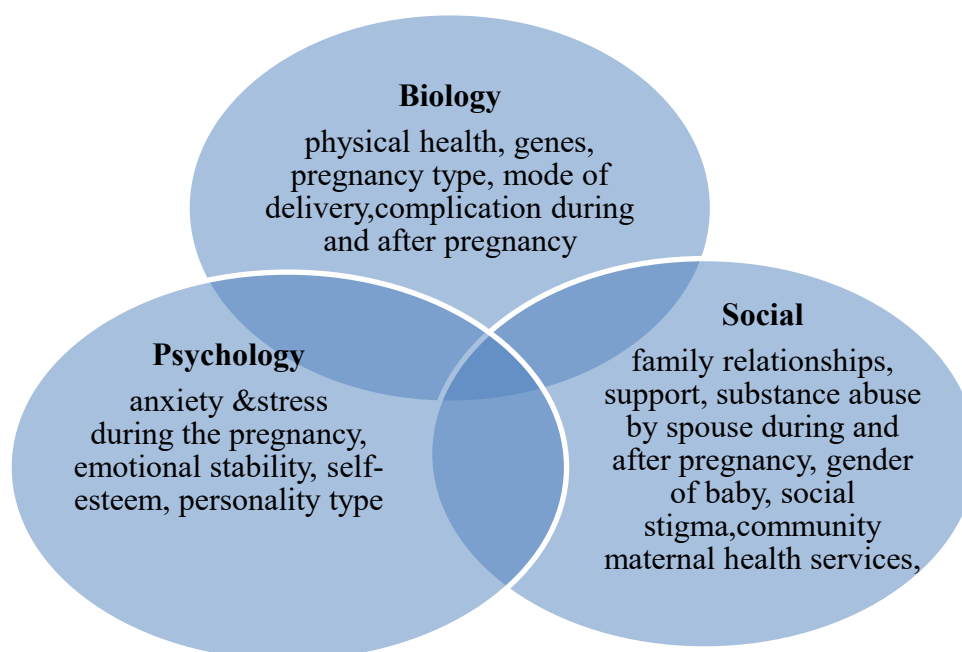
### **Biopsychosocial Model for studying the associated factors of Postpartum Depression**

The basic principles of the model included the biological, psychological, and social dimensions of the person's life and the perception that the person suffers as a whole and not as isolated organs. The doctor should use a holistic approach regarding illness and should consider his/her relationship with the patient as socially equal.



The personality and the emotional reserves of the patient, as well as the particular environmental conditions in which the person lives in, should be taken into account (Papadimitriou, 2017). The person-centered diagnosis is based on the biopsychosocial model, connects science with humanism, and uses all the possible ways so that the clinicians, the patients, and their families collaborate for more effective management of the disease. This approach has been established by the World Psychiatric Association (WPA, 2007) as the program "Psychiatry for the Person."

### ***Risk factors of Postpartum Depression***



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Postpartum is a mental condition after pregnancy. It is better understood if we study it through the lens of biopsychosocial models. The risk factors for developing depression in mothers are as follows:

### **Biological risk factors –**

- i) Biological factors include the physical health of the mother during and after the pregnancy.
- ii) Genetics or family history
- iii) Past history any, physical, or mental illness.
- iv) Obstetrics factors like delivery type, complications in delivery or during pregnancy etc.
- v) Deficiencies of certain vitamins, like Vitamin D or folic acid
- vi) Thyroid or any other hormonal problem.
- vii) Past injuries

### **Psychological risk factors-**

- i) Stress and anxiety during pregnancy
- ii) Emotional stability
- iii) Personality or mood disorders.
- iv) Low Self-esteem or self-image
- v) Stressful life events in the past.

### **Social factors**

- i) Domestic violence or spousal substance abuse
- ii) Family or spousal social support
- iii) Customs and culture of the family or area
- iv) Pride and Prejudice
- v) Social stigmas in taking mental health
- vi) Family environment
- vii) Sociodemographic factors
- viii) Discrimination on the basis of the gender of the newborn
- ix) Availability of maternal health facilities in the community or by the government etc.

The BPS model is a holistic approach and takes into account all possible associated risk factors while planning an individualised treatment plan for women with symptoms of postpartum depression that range from mild to moderate. For more severe cases like psychosis, medical treatment is advisable.

### ***Treatment plan based on the Biopsychosocial Model***

The clinicians could use the tailored treatment plans for the patients according to their needs and requirements. Biopsychological treatment plans are individualised and more successful if implemented correctly. It will be helpful in all the phases of treatment or therapy as mentioned below:

### **Assessment Phase**

During the process of the diagnosis phase, clinicians should take into account all three aspects while assessing and diagnosing the severity of postpartum depression in women. Treatment can be planned individually on the basis of scores received by participants on the

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Edinburgh Postnatal Depression scale., It is most reliable and widely used to diagnose the symptoms of postpartum depression in women after delivery, on the other hand, considering the three basic domains of the Biopsychosocial model.

### Level of Postpartum Depression

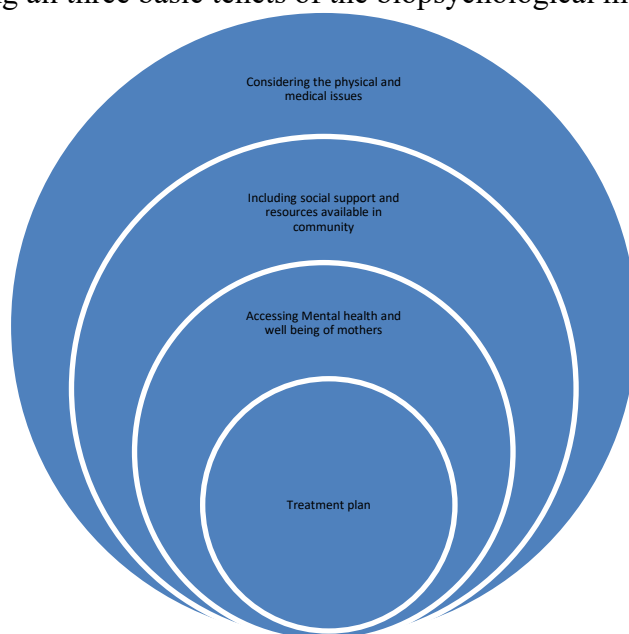
Based on the scores received by women on the depression scale, it categorizes the severity of postpartum depression into three main categories:

1. Mild- score between 11-16
2. Moderate score between 16-21 and
3. Severe risk scores above 21

Women with mild and moderate levels of depression can be treated by socio-approach (support groups, community, and family support) and psychological (counselling and therapies) interventions.

### Interventional phase

The interventional phase is a phase for providing the therapy of intervention therapy for women with symptoms of postpartum depression. Treatment could be planned by combining and considering all three basic tenets of the biopsychological model.



Women with severe symptoms of postpartum depression may receive the treatment, including medical treatment, i.e., medicines or other therapies, along with counselling techniques which may include social help or resources like social support groups and NGOS working on maternal mental health.

### Implications of the study

The model can be used by clinicians for tailoring the individual treatment plan, considering the elements of the Biopsychosocial Model, including the patient's extensive medical history, family history, genetics, and socio-economic status for mothers with Postpartum depression. When it is appropriately done by experts or health professionals, they can intellectualize patients as a whole person, but not as a subject with a cluster of symptoms to diagnose.

## CONCLUSION

Postpartum depression is a major mental health issue for women of reproductive age. It can have negative repercussions not only for the mother but also for the infant if not diagnosed and treated early. The biopsychosocial model could be proven to be a very helpful tool for accessing and planning treatment by utilizing community resources. The biopsychosocial model has proven helpful in studying the associated risk factors of postpartum depression in depth. It has been successfully adopted by many clinicians to treat another health-related issue, like as pain management in bone injuries or in many other conditions. The medical model developed in the present study is exclusively developed for women with postpartum symptoms. This approach could prove a promising one for women with postpartum depression.

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### ***Acknowledgment***

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### ***Conflict of Interest***

The author(s) declared no conflict of interest.

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