

Review

The Prevalence and Risk Factors of Postpartum Depression among Women: A Review Paper



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Article Info	Abstract
Article history: Received: 01 September 2023 Accepted: 29 October 2023	<i>Introduction:</i> Postpartum depression (PPD) is one of the most serious problems that affect women and sometimes men in the postpartum period, it can be distinguished from the postpartum blues by the severity and duration. PPD is more serious and persist after the first week of the postpartum period, and can develop to Psychosis if doesn't treat. The study aim to investigate the prevalence and risk factors of postpartum depression.
Keywords: postpartum depression, postnatal depression, risk factor, prevalence	<i>Methods:</i> An electronic search in the databases, Cochrane databases for systemic review, ELM, Google Scholar, and Pub Med, using the keywords of Postpartum Depression, Postnatal depression, Risk Factors, and Prevalence. <i>Results:</i> After reviewing 23 studies, the prevalence worldwide was one in nine women had PPD. The risk factors were: psychosocial factors like lack of support, history of previous psychiatric illness, biological factors such as the deficiency of some nutrients (Vit-D, Omega-3, the race and ethnicity, the place of residence, the newborn health condition, mode of birth, and Anemia. <i>Conclusion:</i> PPD is the most common complication in the postpartum period. Good assessment from beginning of the preconception period to antenatal and finally in the postpartum period, can rescue many mothers from suffering. We as Healthcare providers should pay more attention to mothers especially in the postpartum period in the same level of priority as her infants. There are many implications for practice, policymakers, and for education.

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INTRODUCTION

Depression is known to be more frequent in women than men because of the emotionally dependent nature of the female, and it can be correlated with the reproductive events in the female life, it may relate to the changes that are occurring with these events, and postpartum depression is one of them. Postpartum depression (PPD) is one of the most serious problems that affects women and sometimes men in the postpartum period, it can be defined according to the American Psychiatric Association (APA) as “a serious psychiatric disorder that affects women and men in the postpartum period” [1], and it can be distinguished from the postpartum blues by the severity and duration, PPD is more serious and persist after the first week of the postpartum period, and can develop to Psychosis if doesn't treated.

PPD has many signs and symptoms that can appear on the mother during this period and help in diagnosing the woman with this disorder, it may include: Restless, worthless, guilty, sadness, overwhelmed, loss of enjoyment, low energy level, and loss of libido, and for the new mothers it may include: unable to make a decision or focus, lose her memory, have changes in sleeping or weight, show lack of concern for herself, withdraw from friends and family, and feeling negatively toward her baby [2] and many other symptoms that cannot be mentioned here. The relationship between mother and infant should be built on the healthy condition for both of them, if one of them has any complications, this will affect the relationship at all. Surely the relationship between

untreated depressed mother and infant is affected negatively. Firstly, on the attachment between them, and we all know the importance of good attachment on the health of both, we do not expect a good thing for the poor attached baby to her mother. By default, it will affect his health physically and psychologically.

In a study conducted in Sweden (2014) to evaluate the impact of PPD on attachment scores, according to 3 subscales for Prenatal Attachment Inventory-Revised (PAI-R) in (718) pregnant women, they found that the woman with elevated depression score had a lower attachment score. Besides the PPD, there were some factors that play a role in poor attachment with baby and eventually these factors can also be correlated with the development of PPD. Such as: lack of support from the partner, and lack of social support to the mother or father [3]. Another disadvantage of PPD is the lower rates of exclusive breastfeeding and the early cessation of it from the depressed mother, and you can expect negative outcomes from the dependence of the mother on bottle-feeding rather than breastfeeding. In a survey done by the United State Lactation Consultant Association (USLCA) in 2015 of 6410 mothers for the period of (0-12) months postpartum, they indirectly found that the development of depressive symptoms was associated with lower rates of exclusive breastfeeding, the mothers were more likely to use the exclusive breastfeeding if they gave birth normally and without any instrument or pain medication, the mothers who gave birth by cesarean section or their births were difficult were more likely to develop the depressive

symptoms and so, the chance for exclusive breastfeeding was decreased [4].

As mentioned before PPD can affect the child physically or psychologically, the psychological outcomes are harmful to the child himself, his family, and the whole society, and it can increase violence, cognitive impairment, and behavioral inhibition [5]. In a survey conducted by Mexican National Health and Nutrition (2017), to investigate the percentage of poor early child health and development outcomes, which was related to maternal depressive symptoms, they concluded "depressive symptoms were associated with a higher risk of never attending a developmental check-up and moderate or severe food insecurity, and population risks attributable to depressive symptoms ranged from 2.30 to 17.45%" [6]. Additionally, PPD in mothers can result in: "Anxiety, insecurity, sleep and eating disturbances, emotional lability, loss of self-esteem, guilt, shame, cognitive impairment, and suicidal thoughts" [7]. Thus, we should focus more on this issue and make a bigger effort to find a solution in light of this and all past PPD outcomes. Moreover, involving all the health care providers in detecting the risk factors, diagnosing, and then providing the treatment, nurses and midwives are in a special position because of being in direct contact with the clients. So, a great responsibility was put on them, in discovering these cases and providing the appropriate treatment. The first line of solving this problem is by detecting the risk factors in the preconception period, and continuing the assessment in the antenatal period since there is a risk to develop antenatal depression

during this period, then by completing the comprehensive assessment in the postpartum period which is a critical period to develop the depression.

METHODS

Design

The lack of resources and appraisal from the former study that explored prevalence and risk factors of postpartum depression among women was an excuse for using the narrative method. Moreover, the question's nature was broad and explorative rather than seeking to answer a specific question. This study used the narrative review method by [8]. The process includes defining the objectives and scope, literature search, discussion and summary of key concepts, and conclusion.

Search Strategy

An electronic search in the databases Cochrane databases for systemic review, ELM, Google Scholar, and PubMed were used without limitations. The search strategy used several keywords in English. Keywords were "Postpartum Depression," "Postnatal Depression," "Risk Factors," and "Prevalence." We used a Boolean search strategy using the operator AND.

Inclusion and Exclusion Criteria

Inclusion criteria were articles which published in peer-review journals, in the English language, within the period between the years of 2013 and 2022, and related to the purpose of the paper.

Screening

After conducting an exhaustive search, the relevant studies were located by first reading the abstracts of the papers to identify those that were relevant, then finishing the reading of the papers to gain a more in-depth understanding of them, and finally classifying the papers into categories based on the goals that they sought to achieve. Studies that were reviewed in this paper about (23) studies.

Data Extraction and Analyzes

The selected literature came from broad and different types of sources. Thematic analysis was chosen because of its accessibility and flexibility [9]. A deductive approach was used to analyze. Data were retrieved from those articles to provide a clear understanding of prevalence and risk factors of postpartum depression among women. Then, the texts were re-read to ensure something extraneous to the critical concept was discarded. The remainder were re-assessed, and the findings were analyzed and interpreted, referring to the objective that demonstrated this study's significance [8].

RESULTS AND DISCUSSION

After reviewing the literature and finding the relative studies, the studies can be divided according to their objectives as the following.

Prevalence of Postpartum Depression

The problem took its importance from the highest percentages of women that suffered in

silence without any attempt to solve this problem, it may relate to the stigma in our society which was correlated with psychiatric disorders. According to the Centers for Disease Control [2], about one in nine women suffers from PPD [2], this percentage just includes the women who gave birth. But eventually, there is a percentage that cannot be considered low for women who miscarried or had a stillbirth, and it was not included in the CDC statistics, some studies estimated this percentage to be (15%) of all pregnancies [10].

Regarding the Arab World, there were no unified statistics for the Arab World alone, but some studies summarized the problem and its prevalence, in a systemic review included (25) studies all around the Arab World, the prevalence was varying between 15- 25 % [11]. In another systemic review, which was conducted in UAE in (2015) for the previous (20) years, they made a literature review of (21) studies all over the Arab World and the middle east region, to analyze the prevalence and risk factors for PPD, they revealed that the prevalence was estimated between (10-51.8%) [12].

In Jordan, Qandil [13] concluded that 25% of the sample, which included 315 women, complained of moderate to severe symptoms, and nearly half of the sample was diagnosed with mild depression. Another Jordanian study conducted to investigate the prevalence and risk factors of depression in the postnatal period among Jordanian women, the prevalence of postpartum depression was 52.9% of a sample that included 1,071 women [14]. The previous percentages gave this important issue its

significance and establish the need to resolve this problem to decrease the possible complications and consequences of PPD, especially with a percentage of just (25%) of all these women going to seek care and treatment [15].

Risk Factors for Postpartum

Depression

There were many risk factors for depression in these papers, and it can also be divided into groups that major studies agreed with them.

PPD and psychosocial problems

We agreed that the psychosocial problems with the family and partner were correlated with developing psychological disorders such as depression, especially if it occurred in this critical period which is full of events and changes. A systemic review conducted in India (2017) supported the previous thoughts by detecting some risk factors for PPD in Indian women, the analysis included (38) studies and involved (20043) women, the risk factors were: financial difficulties, the presence of domestic violence, marital conflict and finally lack of support [16], another literature review founded a similar result for the risk factors of PPD in Malaysian women (2015), but they added the stressful life events, Anxiety, and history for psychiatric illness [17].

There were many studies supported the evidence of the presence of a poor relationship with the mother-in-law as a risk factor for the development of PPD, especially in the middle east and East Asia region, because of the culture of extended family and

the high position for the mother-in-law in the family. The following two studies for supporting the previous evidence. The first study was conducted in China to investigate the risk factors and prevalence of PPD (2014), they found many factors like the relationship with the mother-in-law, and social support. The prevalence of PPD according to this study was 27.37% [18]. The second one was done in Jordan by Mohammad, et al. [19], the risk factors that they obtained were: antenatal depression, unplanned pregnancies, dissatisfaction with overall care, stress, some factors related to fetal condition and gender, the labor process, in addition to our concern of the difficult relationship with mother-in-law. As noticed that there was a shared factor for major studies which is lack of social support.

Social support is the key preventer for many psychological and psychiatric and sometimes physical problems, in our society, the woman in the postpartum period takes the attention of all the family, but what about the immigrant women who used to be in the center of the attention of the family then and for many reasons she found herself in another country without any support. In a study conducted in the USA (2017), to investigate the prevalence and risk factors for PPD among them, they summarized the risk factors as follows: lack of social support (and it was the first one), antenatal anxiety, antenatal depression, life stressors, and maternity blues, the prevalence for those women was higher than the percentage for the original resident in the USA, in the USA it was (14%) and for immigrant women (36%) [20] and the differences between these two percentages

summarized the effect of social support in decreasing the rate of PPD.

The history of Psychiatric Illness and PPD

Relatively almost the previous studies found that history of psychiatric illness was risk factor for PPD. Additionally, a population-based epidemiologic study was made in Denmark (2017), the purpose of the study is to explore the effect of adverse childhood experiences ,especially in females, in the developing of psychiatric illness in the postnatal period, such as PPD, they found that 52% of the sample of (129439) women were experiencing PPD and with a higher risk to develop PPD in those women, the factors that affect the psychological status for women negatively and increase the risk for PPD were: “family disruption, parental somatic illness, parental criminality, parental death,, etc.” [21]. In addition to the history of psychiatric illness, a cohort study conducted in Tokyo (2015) found also the primipara, and a perceived lack of family cohesion as a risk factor for PPD in 1775 women who participated in this study [22].

Omega-3 deficiency and PPD

Mixed of pathogenesis that contributes to the development of PPD. Some of this pathogenesis is related to genetic, environmental, and physiological factors in addition to the body’s demand for some nutrients to cope with the physiological changes that correlated with pregnancy and lactation [23]. One of these nutrients is omega-3 which is important for the

neurological development of the fetus, an animal study was conducted in the USA (2016) to explore the effect of low omega-3 in developing PPD, they explained that this evidence was supported and there was a role for the low omega-3 in developing the depressive disorders [24]. Another study was done in Norway (2013) to support the evidence of the role of omega-3 as a biological risk factor for PPD, they conclude that the deficiency of omega-3 explained (19%) of the Edinburgh Postnatal Depression Scale (EPDS) and there was a negative relationship between the omega-3 status and the depression score [25].

Vitamin D Deficiency and PPD

Vit-D is produced in the body by exposure to sunlight and dietary intake of it. So, the deficiency of Vit-D is considered as an indicator of the lack of exposure to sunlight, and as we know the exposure to sunlight is correlated with the prevention of psychiatric disorders, then there is an indirect relationship between Vit-D deficiency and psychiatric illness. In pregnancy, the demand for most nutrients is increased and one of them Vit-D. So, the antenatal and postnatal periods are critical time for developing psychiatric disorders such as PPD [26]. The second explanation for the relationship between Vit-D deficiency and psychiatric illness is the presence of Vit-D receptors in the hypothalamus, and thus it may be important for neuroendocrine functioning and the adult and fetus brain development, but until now the mechanism is not fully understood [27]. The following studies supported the previous

evidence, the first one was conducted in London (2017), and it was a literature review to explore the relationship between Vit-D deficiencies and depression, they found a significant relationship between them [28]. The second was done in Australia (2014), to investigate the relationship between the low maternal Vit-D in the 18th week of gestation and the development of PPD, they found a negative relationship between them [29].

Mode of birth and PPD

Many studies and papers reported the mode of birth if it is normal, instrumental, or cesarean section as a risk factor or predictor for PPD. Two studies were reviewed, the first one was done in Jordan (2013), which studied Jordanian women serving in the military for the prevalence and risk factors for PPD, the sample was (300) women worked in four military hospitals, the authors used the Edinburgh Postnatal Depression Scale (EPDS) as a tool for assessment, the results were: (67%) of the study participants had mild to moderate PPD, and the participants with severe PPD were (16%) which was very high, the risk factors for those women were: mode of birth (cesarean and instrumental births were associated with higher scores for PPD), lack of support, intendedness of pregnancy, low income, and stress [30]. Another one was conducted in Iran (2014) to determine the relationship between PPD and mode of birth, they concluded that normal vaginal birth was associated with lower scores for (EPDS) [31].

Race, Ethnicity, and Place of residence

As mentioned previously, genetic factors play a role in developing PPD. So, race and ethnicity can be a predictor for PPD because the members of the same race usually share similar genetic factors. In a study conducted in the USA (2014), they recruited (2423) women from all known races in the USA such as whites, African American, Hispanic, and Asian/Pacific, they concluded that the depressed mood and PPD differed across the groups, as an example the Asian/Pacific Islander had the risk for developing the depression 2.1 times more than other groups, stress more likely to be correlated with whites and Hispanic [32]. So, we should recognize the ethnic group when assessing the factors to develop psychiatric illness. In addition to the race of women, we should assess the place of residence for her, a study was done in Canada (2013) to investigate the relationship between the place of residence and the risk for PPD, they recruited a huge sample (n=6126), then they classified them according to the place for groups, rural, semi-rural, semi-urban, urban groups, the results supported the evidence of increasing the PPD levels among women who lived in urban areas than in rural areas [33].

Anemia and PPD

Anemia is associated with morbidity and mortality in antenatal and postnatal periods, the evidence suggests that anemia is associated with depressive symptoms in the postpartum period, to support the evidence two studies were included from the literature.

The first was done in Turkey (2017) to compare the relationship between anemia and developing of depressive mood in the last trimester of pregnancy and the postpartum period, the results supported the previous evidence, which was the anemia during pregnancy was associated with elevated levels of (EPDS) for women in the antenatal and postnatal period [34]. Another study was conducted for the Saudi population to explore the risk factors for PPD in Saudi women (2014) among the sample of (352) women. Low HB level during pregnancy was the major risk factor for PPD. The other factors were: extreme age (early and advanced maternal age), occupation, and parity [35]. So, we should give the anemic clients more attention to prevent PPD symptoms.

Newborn status and PPD

The birth process usually is a happy event. But if the outcomes are unexpected, we do not know the psychological status of both mother and her partner. The unexpected outcome is the preterm infant which needs more power from the mother to cope with this condition. To explore the psychiatric status of the mother who gave birth to a very preterm infant, a study was conducted in the USA (2013), the authors stated that (20%) of those mothers clinically had PPD, (43%) of them were complaining of moderate to severe anxiety level [36]. So, we should pay more attention and screening for mothers of infants who were admitted to the NICU. Another negative outcome of the birth process is stillbirths and neonatal abnormalities cases. So, the mothers who suffered from these cases

should be assessed for PPD [37].

LIMITATION

This study could not explain a broad topic. A specific review might be needed to explore the urgent issues. Another limitation was deductive thematic analysis. The researchers analyzed this concept and idea, and other researchers might find different things when reviewing. Besides, the limitation of the full-text literature before the 2013s resulted in making a lot of assumptions.

CONCLUSION

PPD is the most common complication in the postpartum period, because it affects about one in nine women worldwide, according to CDC statistics. There are many risk factors, and we can divide them into biological risk factors, like the deficiency of Vit-D or omega-3, psychosocial factors such as the lack of support, historical factors, conditional factors like the labor process and the infant status, and many other factors as listed previously. The knowledge of these factors is crucial for prevention of PPD. The good assessment begins from the preconception period to antenatal, and in the postpartum period. Comprehensive assessment for factors of PPD can rescue many mothers from suffering. We as nurses and midwives should pay more attention to mothers, especially in the postpartum period as her infants. Many studies stated that the attention was given to PPD among women just in the previous two decades [38]. Because the infant in postpartum period took the major attention from the health care providers.

IMPLICATIONS AND RECOMMENDATIONS

There are many possible implications of the findings of the current literature review to improve the level of psychological health of women in the postpartum period. The first of all for policymakers, by making the (EPDS) as a routine assessment checklist for all women in antenatal or postnatal periods. In practice, by screening all women for the presence of any of the risk factors among them, and taking the precaution for high risk mother and give the appropriate support for them, and referring them to the specialists if needed.

In education, the curriculum in the universities should include a significant part regarding PPD and the strategies to prevent and treat it. We as health care providers must work hand in hand to decrease the morbidity and mortality among women that related to the reproductive complications, because the women are the viable component of our society.

CONFLICT OF INTEREST

The author has no conflict of interest to declare.

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