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Review Article

Risk Factors for Postpartum Depression: (A systematic review)

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Abstract

A number of mood disorders are seen in women after childbirth, which if left unattended can cause severe problems for mothers and babies. Postpartum Depression is one of such disorders. Postpartum depression is a type of depression that may appear shortly after childbirth. The aim of the present study was to evaluate the risk factors for postpartum depression through a systematic review. This study was done through a systematic review. The findings are based on studies conducted domestically and internationally and from the articles published from 2005 to 2022 in domestic journals (e.g., SID, MAG Iran) and international databases (e.g., Science Direct, PubMed, and Google Scholar) through searching keywords such as postpartum depression, predisposing factors, and risk factors. Accordingly, 16 articles (8 domestic and 8 foreign articles) were identified and reviewed. Findings indicate that three factors including family, socio-demographic and biological-genetic factors are considered as risk factors for postpartum depression. The findings of the present study, as well as the extensive studies that have been performed to investigate the prevalence and risk factors of postpartum depression confirm the importance of this disorder. Therefore, health officials should be aware of the findings of this study and similar studies to alleviate psychological and social tension of women during pregnancy and after childbirth.

Keywords

Risk factor
Postpartum depression
Systematic review

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Introduction

After childbirth, a number of mood disorders are seen in women, which if left unattended, can cause severe problems for mothers and babies (Alba, 2021). Postpartum depression is one of these disorders. Postpartum depression is a type of depression that may appear shortly after childbirth. Acute insomnia, mood instability and a feeling of tiredness are common symptoms. Delusional beliefs and thoughts of committing suicide and harming others (including the baby) may arise. Since there is a risk to the lives of mothers and babies it may be considered a medical emergency (Silva & et al, 2021). The prevalence of prenatal depression varies based on different cultures and communities. In the United States, the prevalence of postpartum depression was lower than the global average of 11.5 percent, but varied from 8 percent to 20.1 percent between states (Ko & et al, 2017). The prevalence of this disorder in Canada is also reported to be about 27% (Brown- Bowers, 2015). In South American countries it is about 60% (DaOud & et al, 2019, Evagorou & et al, 2016 , Halbreich & et al, 2006). Postpartum depression is estimated about 28% in Asia (Mehta & Mehta, 2014), about 18% in Europe (Di Florio & et al, 2017) and 15 to 25% in Africa (Atuhaire & et al, 2020). Moreover, the latest research on global prevalence of this disorder, which included a total of 565 studies from 80 countries and different regions, reported percentage is 17.22% (Ziyi & et al, 2021). Based on the conducted studies, its prevalence has been reported up to 39.4% in Iran. Accordingly, the lowest prevalence of postnatal depression (16%) is related to Ardabil and its highest prevalence (43%) is related to Tehran. In general, the prevalence of postpartum depression in Iran has been reported 28.7% (Mahdavi & Kheirabadi, 2020). Moreover, in Mahdavi and Kheirabadi (2020), the prevalence of postpartum depression in women was reported to be 7.4% in Natanz.

Fear of childbirth, the birth of an abnormal baby, the loss of attractiveness for the spouse, and a sense of duality about caring for a newborn baby can cause significant anxiety for many mothers. The postpartum period, particularly the first six weeks after delivery, is therefore a critical time of vulnerability to mental health disorders

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(Bewly, 2005). The causes of postpartum depression are not clearly identified, but some accelerating factors are known to increase the likelihood of developing the disease (Frieder & et al, 2019). For instance, hormonal changes (Crysta & et al, 2015, Trifu & et al, 2019, Yi & et al, 2021), and genetic predispositions, such as a family history of depression or mental illness, significantly increase the risk of postpartum depression (Elizabeth & et al, 2010, Tiago & et al, 2015). Additionally, many mothers who have experienced traumatic experiences such as miscarriage, the loss of a child under the age of two, or the birth of babies with various physical problems, may develop postpartum depression when recalling these events (Lanes & et al, 2011). Relocation is also another factor: mothers who decide to give birth to a child in a city or country other than their homeland, due to immigration, are more prone to postpartum depression. Because in addition to being away from their families, they have to adapt to a different environment, which will cause them a lot of problems after the baby is born (Keshia & Miles, 2015, Zhang & Jin, 2016, Daoud & et al, 2019). Another contributing factor is neonatal jaundice: statistics show that more than 50% of mothers, after giving birth to their babies and realizing that their babies have icterus suffer the consequences, i.e. postpartum depression**.**

Overall, postpartum depression is an important and common health problem whose risk factors have been reported very differently (Alba, 2021). Hence it is important to conduct general studies to identify the effective factors of such disorder. Therefore, the present study aimed to investigate the risk factors for postpartum depression through a systematic review.

Method

Participants

In the present research, 53 articles were made available using keywords in the initial search, from which 36 articles with related titles were included in the list of abstracts. Qualitative and final evaluation of articles, using checklists and criteria considered by the researcher, included the methodology and timeline of the proposals. Finally, 16 articles (8 domestic articles and 8 foreign articles) were reviewed. The following is a selection chart for article (Figure 1 and Table 1).

At this point, all articles titled “Postpartum Depression” and either “Risk Factors” or “Predisposing Factors” were shortlisted. Then a checklist of information, including the researchers’ names, article titles, dates and places of study, types of study, and other relevant details, was prepared for final evaluation. The researchers reviewed the final checklist and the articles related to the research title were included in the study.

Procedure

The present study was conducted through a systematic review. The findings are based on studies conducted at home and abroad and from the articles published in domestic journals such as SID, MAG Iran and international databases of Science Direct, PubMed and Google Scholar. The search was performed using keywords such as "postpartum depression," "predisposing factors," and "risk factors" in both Persian and English. Accordingly, the researchers collected all articles related to postpartum depression from 2005-2022 and then prepared a list of abstracts.

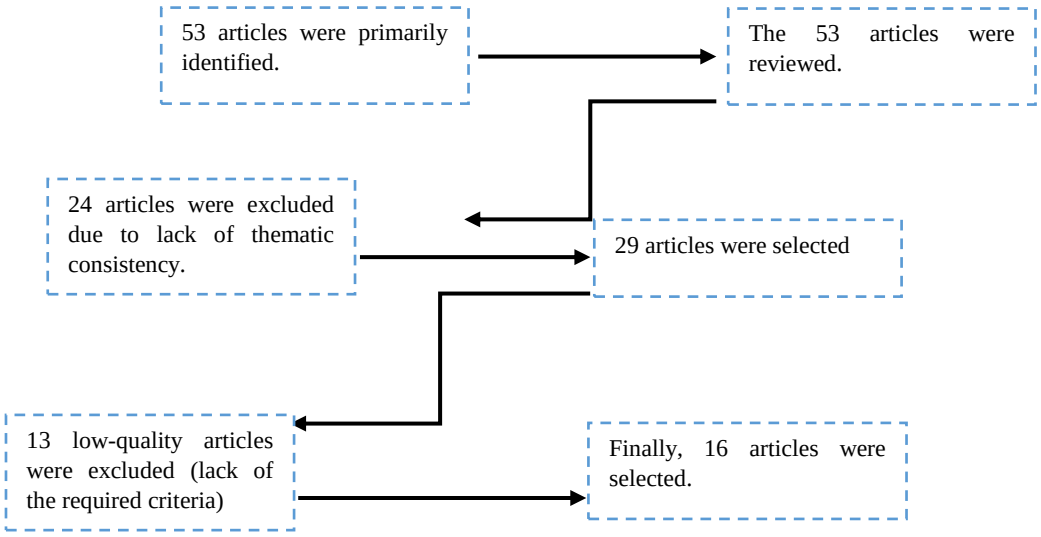

Figure 1. The flowchart of steps for including the studies in a systematic review

The following are the details of the selected articles (Table 1)

Table 1. A review of domestic and foreign research

Row	Author /authors (year)	Title	Method	Sample number	Finding /conclusion
1	Sehati Shafaei et al. (2008)	A study of the relationship between some predisposing factors and postpartum depression	descriptive-analytical	600	There is a meaning relationship between marital dissatisfaction, good/bad relationship with mother and wife's family, dissatisfaction with job and place of residence, unpleasant pregnancy experience, abortion, unwanted pregnancy, breastfeeding problems, increased stress and low maternal self-esteem with postpartum depression.
2	Rahmani et al. (2011)	Predisposing factors for postpartum depression	descriptive cross-sectional	560	The findings indicated that there is a meaningful relationship between economic status, education, unwanted pregnancy, stress level, infants' health problems and not being prepared for the new responsibility as mothers with postpartum depression.
3	Lashkaripour (2012)	Postpartum depression and related factors: a 4.5 months study	descriptive-analytical	300	There is a meaning relationship between the prevalence of depression and type of delivery, maternal age, unwanted gender of the baby by parents, education, previous history of maternal depression, previous history of referring to a psychiatrist and the use of psychiatric drugs in the mother.
4	Saei Ghareh et al. (2016)	Evaluation of contributing factors of postpartum depression among woman	descriptive cross-sectional	175	Based on the results, the variables affecting postpartum depression were history of depression in pregnancy (OR = 2.54), problems with family (OR = 9.32) and economic status (OR = 0.39).
5	Shamsi Khani et al. (2016)	Evaluation of predisposing factors for postpartum depression	Descriptive -analytical	142	The results showed that economic status, problems with the spouse's family was one of the predictors.
6	Tehranian et al. (2017)	Investigating the relationship between postpartum depression and adipokines and.	systematic review	-	The results showed that adipokines and cytokines are associated with postpartum depression.
7	Mahdavi and Khairabadi (2020)	The prevalence of postpartum depression and its related factors among women in Natanz	Descriptive	673	The results showed that maternal disease, preterm delivery and neonatal gender were the factors associated with postpartum depression. But age, education and occupation of the mother, willingness or unwillingness of pregnancy, type of infant nutrition, number of deliveries, type of delivery, maternal thyroid disease and hospitalization of the infant were not related to maternal depression.
8	Tarrahi et al (2021)	Evaluation of the relationship between vitamin D levels and some common complications of pregnancy with the incidence of postpartum depression	cohort (prospective)	300	The findings indicated that pregnancy complications such as urinary tract infections, diabetes and gestational hypertension are predisposing factors for postpartum depression.
9	Cheraghi et al. (2015)	Risk factors for postpartum depression	Descriptive -analytical	240	The results showed that sociological factors such as unwanted childbirth, occupation, literacy and history of depression were associated with postpartum depression.
10	Gelaye et al. (2016)	Epidemiology of maternal depression, risk factors and consequences of having a child in low- and middle-income countries	Review	-	Based on the results of this study family factors (low support), economic status, age and marital status are among the risk factors causing postpartum depression.
11	Smorti et al. (2019)	Comprehensive analysis of risk factors for postpartum depression: socio-demographic, individual, relationship	Longitudinal study	161	The results showed that postpartum depression are associated with multiple risk factors for female such as age, psychopathological features of pregnancy, the degree of attachment during pregnancy to the child, the quality of the

		and delivery characteristics			romantic relationship and some clinical delivery problems.
12	Johar et al. (2020)	Assessing Pregnancy Risk Factors for Postpartum Depression: A secondary cohort analysis trial of	Descriptive	1583	The results showed that history of anxiety or depressive symptoms, socio-demographic factors, or lifestyle were associated with postpartum depression.
13	Lelièvre et al. (2021)	Postpartum depression: Identifying risk factors in Belgium: A cross-sectional study	Cross-sectional		Based on the findings of this study, two risk factors for postpartum depression were identified: Negative emotions during pregnancy and offering only material support by spouse.
14	Usmani et al. (2022)	Risk factors for postpartum depression during the COVID-19 pandemic: A systematic review of the literature	Systematic review		Based on the findings socio-demographic, psychological, pathological, and metabolic factors, as well as previous miscarriage and being misinformed by the media were among some of the factors influencing postpartum depression disorder.
15	Gastaldon et al. (2022)	Risk factors of postpartum depression and depressive symptoms: systematic review and meta-analysis and systematic observation	Systematic review and meta-analysis		Based on the results, factors such as unwanted pregnancy, gestational diabetes, vitamin deficiency, being susceptible to preterm delivery were associated with postpartum depression from among which the strongest factor was the unwanted pregnancy.
16	Bradshaw et al. (2022)	Risk factors associated with postpartum depressive symptoms: A multinational study	Descriptive	more than 100,000 people	Based on the findings maternal age, number of children, child gender, biological factors, number of pregnancies, and family factors were associated with postpartum depression.

Results

The aim of this study was to evaluate the risk factors for postpartum depression through a systematic review. Accordingly, 16 studies were extracted and reviewed. Based on the results, family, social, demographic, and biological characteristics were identified as key risk factors. The results of studies on the aforementioned factors indicated the role of some components.

Discussion

Regarding social factors, the studies showed that mother's age and education, appropriate social support, neonatal gender, number of children, number of pregnancies, psychological problems, income level, dissatisfaction with employment and place of residence, welfare status etc., are important factors. Regarding family factors, we can mention the woman's relationship with the husband's family, the relationship with the husband himself, the quality of their romantic relationship, the support received, and the dissatisfaction with the marriage. It can be said that the lack of proper interaction among the people who support the individual socially, as a result of an inappropriate atmosphere, leads to psychological disorders such as depression. Moreover, studies showed that one of the most important risk factors for postpartum depression was a history of depression and a history of postpartum depression in previous pregnancies. Furthermore, the results of studies have shown that metabolic factors, thyroid disease, vitamin D levels, adipokines and cytokines are among the effective factors in the development of postpartum depression.

Conclusion

Finally, the systematic review conducted through this study Indicates that three categories of factors—family, socio-demographic, and bio-genetic—are recognized as risk factors for postpartum depression. The findings of the present study as well as the extensive studies that have been performed to investigate the prevalence and risk factors of postpartum depression confirmed the importance of this disorder. Hence, health system officials should be aware of the results of this study and similar studies, in order to reduce psychological and social pressures on women during pregnancy and after childbirth. One limitation of the present study is the lack of access to some original articles, which led to their exclusion. Other limitations include the absence of a standardized framework for reporting articles published in Iran, variations in study formats, and differences in implementation methods.

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Disclosure Statement

The authors of this article declare that there was no conflict of interest.

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