

RESEARCH ARTICLE

Extent of Influence of Factors Causing Postpartum Depression Among Child Bearing Mothers

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Abstract

Postpartum depression is a condition that is commonly experienced by postpartum women after childbirth. Determination and detection of factors influencing postpartum depression will help mothers explore evidence-based strategies for early prevention and treatment. A quantitative descriptive survey design was utilized in the study. Data was collected through stratified random sampling. The childbearing mothers in four selected communities of Bontoc, Mountain Province: upland, riverside, AlBaGo, and central Bontoc were the respondents of the study. Data gathered utilized a self-made questionnaire based on journals and research studies about postpartum depression. Results of the study showed that the respondents considered the impact on the extent of factors causing postpartum depression among child bearing mothers. There is a significant difference on the extent of factors influencing postpartum depression among child bearing mothers when grouped according to civil status but no significant difference when grouped according to age, educational attainment and employment status. The respondents ranked the suggested measures to prevent postpartum depression as: 1) psychological, 2) physical and;3) social. Promoting the mental health and well-being of mothers and families through implementation of an evidence-based strategy in the Municipal and Provincial health units can prevent or reduced Postpartum depression. Early interventions on postpartum depression promoted maternal recovery and strong foundations for postpartum mothers. This includes educating mothers, planning health education programs, focusing on early detection, and distributing behavioral change communications through flyers, brochures, and training materials.

Keywords: *Postpartum depression, child bearing, depression*

Introduction

Pregnancy and childbirth involve significant psychological and role changes. Due to psychological changes, 80% of women experience unexplained sadness during this period (Pillitteri, 2003), thus, it is crucial to protect the women's health specially from postpartum depression (PPD). PPD is a common complication among women after childbirth, as they face multiple responsibilities related to their new-born, family, and personal well-being. PPD is particularly noted among women who had multiple deliveries. It and can become a serious issue if left untreated.

Globally, the prevalence of PPD is 17.22% in the largest meta-analysis of PPD to-date (Wang et al., 2021). Dennis, et. Al. (2017) reported a prevalence of 13-40% on PPD. In India the prevalence of postpartum depression ranges from 15 to 20% (Upadhyay et al., 2017). Furthermore, World Health

Organization (WHO) (2020) presented that the common perinatal mental disorders are more prevalent in low and lower-middle-income countries. In addition, low middle income countries have the highest prevalence of PPD and that central Asian countries lack papers to identify PPD (Wang et al., 2021). The WHO (2020), posited that about 10% of pregnant women worldwide and 13% of women in the immediate postpartum period experience depression.

Aside from its prevalence, Abenova et al. (2022), cited that PPD is influenced by various risk factors such as social, psychological, biological, and genetic factors. Most new moms often experience postpartum "baby blues" symptoms which typically begin 2 to 3 days postpartum (Mayo Clinic, 2024). In the Philippines, 16.4% of new mothers experience postpartum depression at six weeks post-delivery (Postpartum Depression

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Statistics, 2019). Liu et al. (2021) highlights potential psychological risks to maternal-infant bonding in postpartum women emphasizing the need for improved interdisciplinary partnerships among healthcare professionals.

In like manner Madlala and Kassier (2017) suggests that breastfeeding can prevent PPD. Further, Díaz et al. (2020) highlights some maternal psychological factors play a role in breastfeeding pattern, besides sociocultural, work, and family life factors. PPD affects functioning, relationships, mother-infant connection, and child development, with undiagnosed cases among 50% of mothers (Amer et al., 2024). To address the lack of statistics and awareness on this issue, the "Postpartum Depression Act of 2008" (House Bill 3643) was passed, aiming to improve understanding and support for those affected by PPD.

Given the responsibilities faced by healthcare professionals who deal with PPD patients, this research was undertaken since it has been observed that there is an incidence of PPD in the locality that has not been documented. Hence, it is vital to know the extent of influence of factors causing PPD among child bearing mothers. Results of the said research shall be made a basis for planning and developing health education programs that focus on PPD.

Statement of the problem

This study aimed to determine the extent of factors causing or influencing PPD among child bearing mothers. Specifically, it aimed to know the significant differences on the extent of influence of factors causing PPD among child bearing mothers when grouped according to age, educational attainment, employment status and civil status and it also determined the suggested measures to prevent PPD among child bearing mothers.

Methods

Research Design

An analytic cross- sectional design was utilized in the study.

Locale and Population

The study surveyed childbearing mothers in Bontoc, Mountain Province, covering upland, riverside, AlBaGo, and central Bontoc. Data was collected through stratified random sampling, dividing the population into age, education, civil status, and employment status. The respondents were female, 15 to 49 years of age, either married or single, mothers who were clinically diagnosed and who had experienced symptoms of PPD during

clinic visits or home visits. Mothers who have not experienced the symptoms of postpartum depression were excluded.

Data Gathering Instrument

A self-made questionnaire was used. The questionnaire was validated by two nurse experts specializing in maternal and child nursing and a curriculum expert. They suggested improvements to the questionnaire's statements, confirming its validity. Pre-test was conducted with a Cronbach alpha of 0.8, indicating that the questionnaire is reliable. Respondents for the pre-test were not included in the actual data gathering. The questionnaire consisted of three parts. Part 1 is the demographic profile, part 2 measures the extent of effect of factors causing PPD. Part 3 are the suggested measures where the respondents placed check marks on their suggested measures and they were ranked based on how these measures would be helpful to them.

Data Gathering Procedure

After validity and reliability, the researcher sought a permission to conduct the research. Communication letters were sent to the office of the Municipal Mayor through the Municipal Health Officer. After the request was granted by the municipal mayor and the municipal health officer, the researcher recruited respondents. The researcher explained the purpose of the research and assured ambiguity. The researcher distributed the questionnaire herself for prompt retrieval to assure 100% collection of data. The researcher treated the data on SPSS to come up with results.

Statistical Treatment of Data

The study used T-tests to analyze the influence of factors causing postpartum depression (PPD) among child-bearing mothers. It also analyzed factors based on age, (young reproductive age & older reproductive age) educational attainment (basic education & higher education) and civil status (with spouse & no spouse). After being grouped according to employment status, analysis of variance (ANOVA) was utilized to determine significant differences on the mean scores on the extent of influence of factors causing PPD among child bearing mothers.

Findings and Discussion

Table 1 shows the extent of influence of factors causing PPD among child bearing mothers. Overall, the respondents got a mean score of 3.28 which means that the respondents perceived all the factors influence the occurrence of PPD. Furthermore, presence of factors if not given enough attention could make mothers vulnerable and affect the way the mothers

Table 1. *Extent of influence of factors causing PPD among child bearing mothers*

Indicators	Mean	SD
1 Unemployment	3.44	1.180
2 Sensitivity to criticisms or advices from everyone	3.38	1.116
3 Child care stress	3.39	1.095
4 Marital conflict	3.25	1.173
5 Low socio-economic status	3.39	1.093
6 Lack of personal or family support	3.33	1.310
7 Stressful life events	3.60	1.159
8 Low self esteem	3.22	1.259
9 Single parenthood	3.14	1.549
10 Unwanted or unplanned pregnancy	3.16	1.458
11 Formula feeding rather than breastfeeding	2.87	1.304
12 Infant temperament problems (colic)	3.08	1.206
13 Prenatal anxiety	3.35	1.207
14 Prenatal depression	3.30	1.241
15 Social isolation	3.24	1.263
Average	3.28	0.894

Table 1.1. *The Extent of influence of factors causing PPD among child bearing mothers according to Age*

Age	Mean	t-test	p-value
1 Young Reproductive age (15-34)	3.3312	1.897	.059
2 Older reproductive age (35- 49)	3.1371	1.876	.062
Total	3.2775		

interact and care for their offspring. Similarly, Ghaedrahmati (2017) revealed that biological and social factors, including lifestyle and socioeconomic factors, contribute to the development of PPD in women. Agrawal, et al. (2022) also concluded that the risk factors for PPD may have strong to weak associations with the development of PPD.

The highest factor causing PPD among child-bearing mothers is unemployment. Additional member means additional expenses of the family considering financial constraints. This can also result in exhaustion and depression causing feelings of inadequacy leading to depression. In the study of Chi, et al. (2016), it was found out that postpartum women with fewer resources and indicate a higher level of stress leading more

PPD symptoms than those with more financial stress. It is evident on the table that “formula feeding rather than breastfeeding” has the lowest mean of 2.87 as perceived by the child bearing mothers. This shows that most of the respondents are breastfeeding mothers and therefore, they consider it as the last factor to influence PPD. Breastfeeding duration has been found to be inversely related to postpartum depressive symptoms (Pope & Mazmanian, 2016). Further, Diaz et al. (2020) highlights that in the third month breastfeeding women has lower perceived stress than those with mixed feeding. Addressing these factors is crucial to prevent negative emotions on the baby. Study further revealed that PPD is associated with several risk factors but the level of prenatal attachment to child was the most important predictor of PPD.

Table 1.2. *The extent of influence of factors causing PPD among child bearing mothers according to educational attainment*

Educational Attainment	Mean	t-test	p-value
1 Basic Education	3.2554	-.336	.737
2 Higher Education	3.2883	-.349	.727
Total	3.2775		

Table 1.3. *The extent of influence of factors causing PPD among child bearing mothers according to civil status*

Civil Status	Mean	t-test	p-value
1 with spouse	3.1737	-3.195	.002
2 No spouse	3.4796	-3.237	.001
Total	3.2775		

As gleaned from the table the null hypothesis is accepted at 0.05, indicating no significant difference in age groups regarding PPD influence among child-bearing mothers. PPD significantly affects reproductive-age women, emphasizing the need for timely mental health support. This was supported by the study of Smorti and Federica (2019) that the severity of PPD was positively affected by the age of women. This maybe linked with financial instability, lack of support and emotional immaturity thus depressive moods may prevail. Further, Yim et.al. (2015) suggest that while younger and older maternal age might be associated with PPD, these effects are often mediated by other factors like economic status, previous mental health issues, and the presence of social support. Moreover, Figueiredo, et al. (2014) found no consistent association between maternal age and PPD. Instead, this study discovered that factors like lack of partner support, life stress, and a history of depression are more strongly associated with PPD across all age groups. Older reproductive age may face PPD due to balancing career, family, and physical challenges, while young reproductive age may have less parenting experience, less established support system, lack of social and economic support, and emotional immaturity thereby resulting in stress and depression. In like manner, Li & Graham (2017) pointed out that younger women often have lower emotional regulation, which can exacerbate the transition into motherhood, increasing vulnerability to PPD. In addition, Robertson et al. (2004) highlights that younger maternal age, particularly under 20, was associated with a higher incidence of PPD attributed to psychological immaturity, fewer coping resources, and more unplanned pregnancies among younger women.

Table 1.2 implies that there is no significant difference on the extent of factors that influence PPD among child bearing mothers according to educational attainment. Since, these respondents were not able to pursue higher educational attainment hence, they only finished basic education that is

perhaps due to financial constraints or early marriage as it is evident in the mean value of 3.2554. Moreover, the cause of their PPD may be associated to the predominant role of other factors, such as social support, personal mental health history, and access to resources. Furthermore, it also shows that education is not a deciding factor in determining the vulnerability or resilience of mothers on PPD. This finding was supported by VidhiChaudhary et al. (2021) where women with a higher level of education, particularly those with a graduate degree, experienced higher levels of depressive symptoms. In contrast, Matsumura, et al. (2019) concluded that a lower education level was an independent risk factor for PPD. In addition, in the study of Liang et al. (2020) and Osborne et al. (2021) revealed that the levels of education are not associated with increased risk of PPD. Nonetheless, interventions should focus on addressing a broader range of contributing factors on PPD rather than emphasizing educational attainment.

Table 1.3 reveals that the alternative hypothesis is accepted at 0.05 significance level thereby indicating significant differences in civil status among respondents regarding the influence of factors causing PPD among child-bearing mothers. Such findings suggests that civil status plays a substantial role on how the different groups of mothers are influenced by the factors leading to PPD. Majority of respondents are married women who believe in marriage, are financially stable and have stable support systems that can help prevent PPD. In like manner, single postpartum mothers face greater social and financial challenges, limited support, and pressures. Some respondents may not be ready for marriage or marital challenges as supported by Robertson et al. (2004) who cited how single mothers and mothers experiencing separation from their partners are more vulnerable to PPD due to the lack of partner support and increased stress associated with single parenting. Another study of Ajinkya, et al. (2013) found that single mothers and those with poor marital relationships are at a higher risk for

PPD. However, Yim et al. (2015) found that civil status alone was not consistently a predictor of PPD across various studies. Eastwood et al. (2017) did not find civil status to be a strong independent predictor of postpartum depression. Similarly, Malus et al. (2016) concluded that patients dissatisfied with the quality of their marital relationship experienced an increased severity of PPD symptoms. Another study of Smorti, et. al. (2019) revealed that the length of the relationship with partner, level of education, employment status, and planned pregnancy did not significantly affect the level of PPD.

Table 1.4. *The extent of influence of factors causing PPD among child bearing mothers according to educational attainment*

Employment Status	Mean	f-test	p-value
1 employed	3.3061	.066	.937
2 unemployed	3.2642		
3 self employed	3.2778		
Total	3.2775		

Notably, this study found no significant difference in the influence of factors causing PPD among child-bearing mothers based on employment status. Employed respondents, with a mean of 3.3061 are discovered to work in order to supplement their income and support their families. Unemployed respondents may be left to care for children while their husband works. Furthermore, it means that employment status alone does not significantly influence the interplay with other factors. Employment may also be a protective factor for PPD. It is likewise noted that women who worked outside of the home has no differences between those who worked full-time versus part-time (Lewis et al., 2017). Similarly, Aochi et al. (2021) concluded that regular workers, part time workers and non-employed had an increased risk of symptom. Furthermore, it is recommended by Miyake et al. (2010) that employment, especially full-time employment and holding a professional or technical job, may reduce the risk of PPD. The study of Lewis, et al. (2017) found that employed women had a higher prevalence of PPD compared to unemployed women in South Korea. Al Hinai and Al Hinai (2014) however, think otherwise because their study revealed that there is no significant difference in PPD rates between employed and unemployed women.

Table 2. *Overall suggested measures to prevent PPD*

Classification	Average Score	Percentage	Rank
Psychological	1464	33.65%	1
Physical	1446.1429	33.24%	2
Social	1440.7143	33.11%	3

With psychological health as the most crucial factor, results revealed that psychological, physical, and social classifications are the most effective measures to prevent PPD. Interventions like cognitive, social, emotional, economic and community-based interventions empower women to take control of their well-being and reduce the risk of PPD. With early identification and intervention improving long-term prognosis, the healthcare community plays a role in identifying and treating PPD. Child-bearing mothers should consult trained maternal and child nurses for PPD risk assessment. Findings of Ahmadpour (2023) mentioned that a woman most likely experience PPD following child birth. Further, Anokye et al. (2018) concluded that psychosocial support had been the most effective intervention. In like manner, Physical are physiological changes that occur during pregnancy and postpartum period leads to hormonal shifts that may influence women's mental health and well-being in different ways depending on the period of time (Pope & Mazmanian, 2016).

Table 2.1. *Suggested measures to prevent PPD on Physical aspect*

Classification	Average Score	Percentage	Rank
1. Take care of your self	1586	15.67	1
2. Get proper sleep	1579	15.60	2
3. Set aside quality time for yourself	1477	14.59	3
4. Ease back into exercise	1445	14.27	4
5. Make meals a priority	1392	13.75	5
6. Pamper self even for a short time with work	1352	13.36	6
7. Go for massage therapy for relaxation	1292	12.76	7

From the table it can be seen that “taking care of oneself” ranked one of suggested measures to prevent PPD. Respondents perceived it as crucial for functioning and boosting moods. Encouraging support from family, friends, and household members can help alleviate this issue. “Proper sleep” is ranked second on the list of measures as it helps mothers relax and focus on activities. The third rank is “set aside quality time for yourself”. Outdoor activities can help combat baby blues and depressive feelings. Spending quality time with family is important on the health of the postpartum mother. The respondents believe that it is a healthy and relaxing activity. Furthermore, it allows mothers to engage in activities that make them feel good. Finally, the respondents ranked “go for massage therapy for relaxation” as the seventh option. Massage therapy can induce relaxation but it may not be the most effective or accessible option for all mothers. Most importantly, early intervention on physical can reduce the risk for mothers to develop PPD and can promote the overall wellbeing. The study of Radzi, et al. (2021) revealed that postpartum depression affects people's life in many ways including personal matters, health and dietary habits thereby advising the use of these suggested measures to prevent the symptoms of PPD from getting worse.

Table 2.2. *Suggested measures to prevent PPD on Psychological aspect*

Classification	Average Score	Percentage	Rank
1. Lean on your partner, family and friends	1550	26.47	1
2. Resolve conflict in the family	1514	25.85	2
3. Share what you are feeling with at least one other person	1507	25.73	3
4. Get out of the house	1285	21.94	4

The table shows that relying on partners, family, and friends is the top recommended measure to prevent PPD. Respondents emphasize the role of partners, family, and friends in pregnancy and postpartum, by providing financial and moral support. Notably, good interpersonal relationships within the family are crucial for reducing burdens and seeking support. Open communication is essential for conflict resolution and effective techniques. The third ranking is “share what you are feeling with at least one other person”, with an average of 35.73%. The respondents believed that venting one's feeling can alleviate stress and prevent negative emotions thereby promoting healing. Sharing their stories or experiences with people they trust would make them feel psychologically healthy and provide valuable support and guidance to these mothers. The last rank, “get out of the house,” is ranked 4th with an average score of 21.94%. The respondents may not be fond of going outside the house and engage in activities outside the home hence, they believe that this is a last resort on measure to prevent PPD. Furthermore, this suggested measure “getting out of the house” may represent a valuable strategy, but this has limitations and potential. It is important to fully understand how this suggested measure can prevent PPD and to develop a more accessible intervention.

The table further shows that the average scores of each classification is very close. Respondents may believe that all the measures are very much helpful in preventing PPD. In addition, these suggested measures can also be combined with other strategies such as medication, professional counseling, and lifestyle changes, for optimal prevention and treatment of PPD. Likewise, it is important to note that these suggested measures can also be influence by cultural factors and such can also depend on the mothers' needs and circumstances.

Table 2.3. *Suggested measures to prevent PPD on Social aspect*

Classification	Average Score	Percentage	Rank
1. Make your relationships a priority	1531	15.18	1
2. Develop a support plan while you are pregnant.	1488	14.76	2
3. Seek early support from peers, elders, or kin	1435	14.23	3
4. Spend a bit of time in outdoors to help calm head and starve depressive feelings	1429	14.17	4
5. Join organization that tackle Maternal and Child development	1422	14.10	5
6. Participate in livelihood projects to help augment the family income	1416	14.04	6
7. Join a group for mothers	1364	13.53	7

The table indicates that “making your relationships a priority” has the highest rank. Respondents have positive relationships with family, husband, friends, and neighbors, and that issues are being prioritized for resolution. The second “develop a support plan while you are

pregnant” which implies that a woman should establish a supportive circle of friends who can provide emotional support and comfort during pregnancy. The third key recommendation “seek early support from peers, elders, or kin” can reduce suffering and prevent untreated baby blues from resolving on its own. McMahon et al. (2006) concluded that quality bond of mother significantly influences woman's well-being thereby reducing the risk to develop a PPD. Respondents ranked “join organization that tackles Maternal and Child development” as the fifth valuable measure. Women who felt more affection toward the unborn are more compliance with health practices during pregnancy (Maddahi et al., 2016) hence, addressing the emotional and psychological aspects of child-bearing mothers support in making healthy choices and ensure positive outcomes for both mother and baby. Perhaps respondents perceive that mothers attending seminars on maternal health gain knowledge on coping with maternity problems and use these strategies during postpartum. This may not resolve problems but is one of the most common strategies used. Then, “Participating in livelihood project to help augment the family income” ranked number six and seventh is “join a group for mothers”. Speaking to other mothers and health care provider when symptoms occur can significantly reduce the risk of developing PPD. Further, prioritizing healthy relationships, seek support, exposure to morning sunlight, participating in community organizations, engaging in livelihood projects, and sharing experiences create a positive environment can reduce stress, anxiety, and promote overall maternal health. The suggested measures can also help reduce feelings of isolation and stigma thereby preventing PPD.

Limitation of the Study

The content validity of the tool that was use was not quantified thereby rendering the non-computation of the content validity being indexed. There is also the absence of a definitive clinical diagnosis by a physician of some respondents. Presenting signs and symptoms that may be 'suggestive' of depression were the ones used to qualify respondents who were not clinically diagnosed by a physician.

Conclusion

PPD is a prevalent concern among childbearing mothers, with multiple factors potentially influencing its onset. However, despite the identification of suggested measures to prevent PPD, there remains a gap in understanding the specific extent to which these factors impact PPD, especially in relation to demographic variables such as age, educational attainment, civil status and employment status.

Recommendation

Creation and dissemination An IEC material regarding factors causing PPD and the suggested measures to prevent postpartum depression must be carried out. In addition, equipping healthcare providers with the necessary knowledge and skills on early detection of PPD presented in the results of this study through trainings will be crucial for timely intervention leading to better maternal health outcomes.

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*“The goal of nursing research
is not just to generate knowledge
but to transform care.”*

– Polit, D.F., & Beck, C.T. (2020).